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when we have the stars?

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THE
PHOTO-BEACON

A JOURNAL DEVOTED TO

PHOTOGRAPHY

IN ALL ITS PHASES.

VOLUME XV.

1903.

"LET THERE BE LIGHT."

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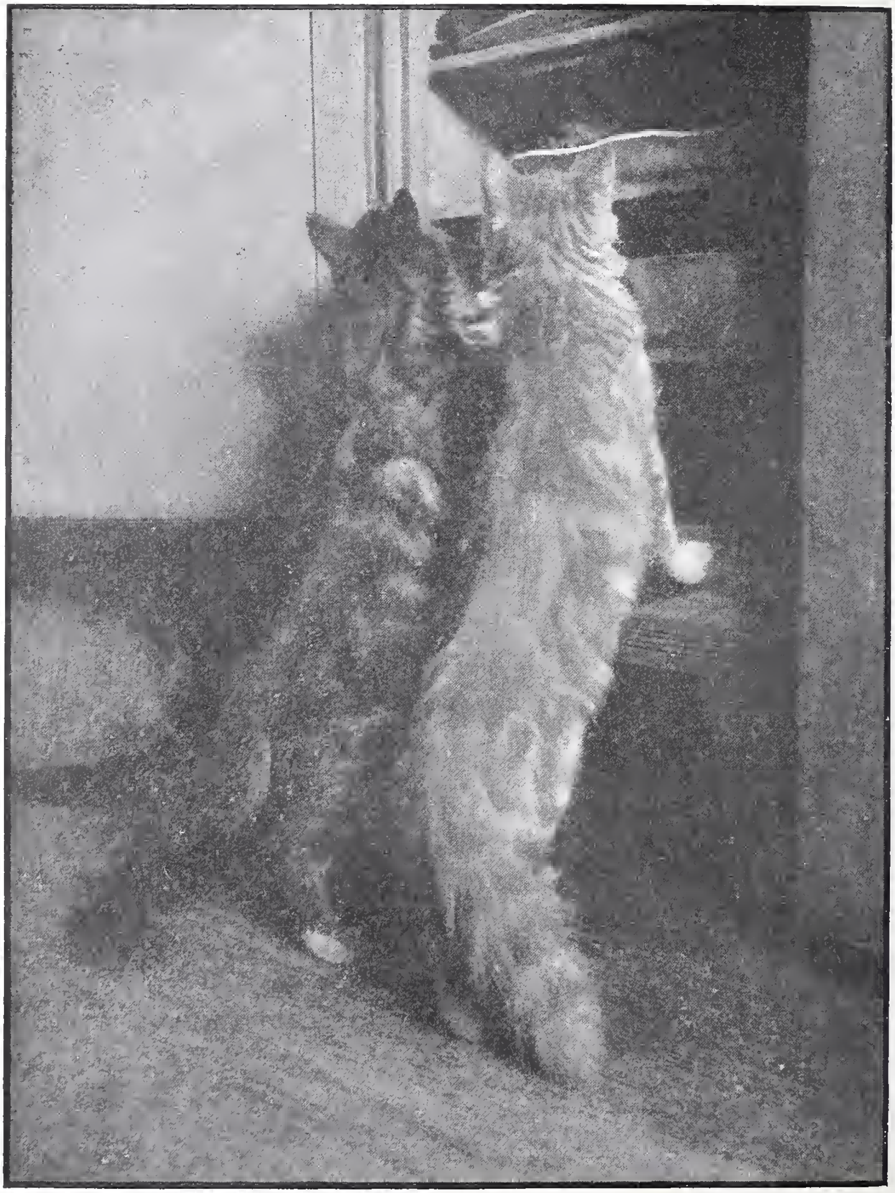

Curtis Bell, Chicago Salon.

RAVVY AND CADDY.

THE

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CLEANING LENSES.

Very many of the questions that reach me day by day from those who are having trouble in photographic manipulation, resolve themselves ultimately into a very few simple propositions, and it is my purpose during the present year to take up these in turn and point out to my readers many simple unexpected causes of trouble. For instance, one of my friends very recently came in to inquire if a camera of a certain make was any good, as he could not get a decent negative. Every plate he exposed was both fuzzy and underexposed, very much so, and he was convinced that the maker had turned out a very bad instrument. His exposures were timed by my Exposure Tables and he was convinced, although he had not the courage to say so, that my figures were very far from being right. Before guessing the cause of his trouble I proceeded to examine his case and asked him quite a number of questions, which, from his point of view, were entirely unnecessary. I first wanted to know how long he had had the instrument, and I found that he had acquired the ownership a few days before. Was it new when he bought it, was my next inquiry, and he admitted that it had been bought secondhand; then, what is the date of the model? This he did not know, but presumed it was a number of years back. At last I learned that, in all probability, it had not been used for four or five years. As a matter of fact, its previous owner, after buying it, had stowed it away on a shelf and had never made even one exposure with it.

I was now master of the situation and told him his lenses were dirty, but he protested against such an assertion, for he had taken care to wipe the front of the combination with a soft, clean handkerchief. Seeing that I could not convince him I requested him to bring the instrument to my office, which he did, and I at once took out both the combinations and placed them on a piece of paper on my desk. I requested him to look at them and note how dirty they were, but he could not see that they were so, and I then wiped the inner surface of one of the combinations and placed the two side by side. The difference was very evident. The other was treated in the same way, the combinations restored to their cells and my friend had no difficulty afterward over definition and exposure.

This is the season of the year when most amateurs relegate their cameras to a shelf or some convenient corner, and, for the next few months, it is unlikely that the instrument will ever be used. It is very probable that when the first exposure is made the negative will prove to be much underexposed and the owner will be guessing as to the cause. The experience above stated will be a guide to him. Let him unscrew both combinations of his lenses and he will find that, during the winter months, an oily-looking scum will have deposited on the inner face of the lens, and all he needs do is to wipe them clean with a soft cotton handkerchief that has been well washed and is perfectly clean and free from dust. In my own practice I always carry in one of my pockets a handkerchief of this kind, neatly folded up, which I reserve absolutely for the cleaning of lenses and my spectacles, and I find the habit is a very good one.

It might be wise to say a word or two on the care of lenses. A few years ago one of my readers in Iowa sent in an instrument which was hopelessly ruined, as both combinations were cracked in the most extraordinary way that I ever saw. The effect was similar to what one gets when a piece of glass is well heated, and then has a drop of water flung on it. The whole surface was a perfect network of minute cracks. I have no doubt that if the lenses had been removed from their cells they would have crumbled into thousands of pieces. On inquiry I found that the owner and his family had gone visiting during a warm spell in the month of January, being absent from the house not over forty-eight hours. In the interval a cold wave came down, and the thermometer fell below the zero point and the swift change of temperature brought about the result. The thermometer in the house on the owner's return indicated below zero. This little incident indicated how risky it is to carry a valuable lens out of a warm atmosphere into zero weather.

I remember, during my work at the World's Fair, I was called upon to make a number of exposures one day when the thermometer was 12 below zero, with a big gale blowing. The negatives were made on order of a gentleman from New York who intended to leave Chicago that night and who was desirous that he should be with me while the exposures were made, so that I might get exactly what he wanted. The lens used was a very valuable one, costing somewhere like $150, and my employer realized as much as I did the great risk of damage that we were undertaking, and, accordingly, he made an agreement with the gentleman that if it was ruined he should pay the cost.

In starting out I took very great precautions. The instrument was placed in a carrying case, wrapped up in a heavy focusing cloth and placed outside so that the lowering of the temperature would be very gradual. At the end of half an hour or so I opened the carrying case so as to allow the cold air freer access to the inside, and a little later began to unwrap the folds of the cloth. Altogether I spent over one hour gradually allowing the cold to reach the lens, and then I started out to my work. I was gone altogether four hours, and, on my return, before entering the warm room I took off the lens, wrapped it once more in the cloth and placed it in the carrying case so that the heat of the room should reach it very slowly. The result was that the lens went through this severe test absolutely without injury.

Many years ago I had an experience which, doubtless, has been undergone by many of my readers. One misty day I set up my camera to take a rather elaborate picture that I had spent over an hour in arranging. I made in all six exposures, and found that the first was very much underexposed, while all the others were utterly useless. As I took the lenses off the camera I noticed a fine film of moisture spread all over, and therefore knew the cause. The lens had been colder than the surrounding atmosphere, and, consequently, the moisture had condensed upon it. There is a word of warning in this experience to those who attempt to make flash-light pictures during the winter, for, in all probability, the camera will be stored in a cool place, and, on being introduced into a warm room, where there is lots of moisture present from the breath of the inmates, the lenses will become coated with a thin film which will reappear as often as wiped off until the instrument has attained the temperature of the room, which may take anywhere from a few minutes to half an hour, depending upon its previous temperature and the size of the instrument.

A final word of warning about lenses. It is difficult to drop a lens without damaging it, although the result may not be visible to the naked eye. A knock, especially with a heavy lens, will cause an indentation, and this indicates that pressure is producing a strain in the lens which will affect definition much more than one would suspect. I remember, on one occasion, seeing the effects of this kind of strain in a lens very beautifully illustrated by means of a lantern. A piece of glass was placed in front of the beam of light and pressure brought upon it by means of a screw. Every turn of the screw was visible on the lantern screen in change of color, indicating that the shape of the glass was being altered by the strain.

When the dirt on the lens is not removable by breathing on it and subsequent wiping with a soft cotton cloth, I would suggest that it be sent to the maker for repair, because the application of firm friction is very apt to destroy the fine polish of the instrument, thus impairing its definition.

F. Dundas Todd.

Alvin L. Coburn, Chicago Salon.

MRS. KASEBIER.

COMPETITION No. 55.

All in all, the landscape competition is always the most satisfactory one of the year, for the simple reason that it is in outdoor work that the average amateur finds the greatest possibilities for the practice of his hobby. From the moment he can toddle, man is in contact with nature, and if he has eyes at all he ought to be able to understand the charms that surround him better than anything else, and understanding invariably means affection, for we like what we understand and detest what is to us incomprehensible.

In this competition the judges made the following awards:

First prize — John Chislett, Crown Hill, Indianapolis, Indiana.

Second prize — Louis Fleckenstein, Faribault, Minnesota.

Third prize — W. H. Porterfield, 100 Lakeview avenue, Buffalo, New York.

SPECIAL MENTION:

J. H. Field, 4; C. H. Gardner; John Chislett, 2; W. H. Evans, 2; George F. Mannel, 2; Frank E. Marks, Gus Horlin, F. B. Hargett, Mrs. G. M. Dodds, F. S. Foley, E. B. Collins.

PARTICULARS OF WINNING PICTURES.

First Prize — No particulars given.

Second Prize —Taken in August, 2 P.M., on Standard plate, stop *f*/7, exposure 1-5 second. Printed on home-made Kallitype paper. Cloud effect printed in.

Third Prize — Made in November at 4:30 P.M., stop *f*/8, exposure ¼ second, on Cramer Iso plate. Printed on Glossy Cyko.

FUTURE COMPETITIONS.

Competition No. 57 — Pictures of children under seven years of age, not necessarily portraits. Closes January 31.

Competition No. 58 — Lantern slides, any subject. Closes February 28.

Competition No. 59 — Snow pictures. Closes March 31.

Competition No. 60 — Waterscapes. Closes April 30.

Competition No. 61 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 62 — Domestic animals. Closes June 30.

Competition No. 63 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 64 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender, but must not have even such words as "Photographs." *All packages violating this rule will be declined.* Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

Third — Books to the value of $1.

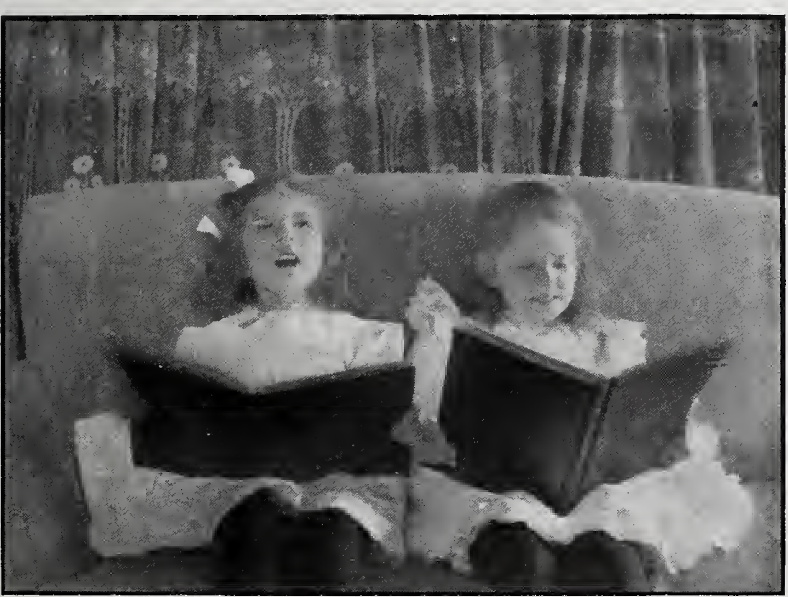
Any books, on any subject, or if preferred, any article we can buy in Chicago.

I USE your Exposure Tables and do not see how so many get along without one of some kind. I have two, but like yours the best. This fall I made thirty-six exposures and had thirty-five good plates, so far as exposure was concerned — sea views and landscapes.

CRITICISMS OF THE PRIZE PICTURES.

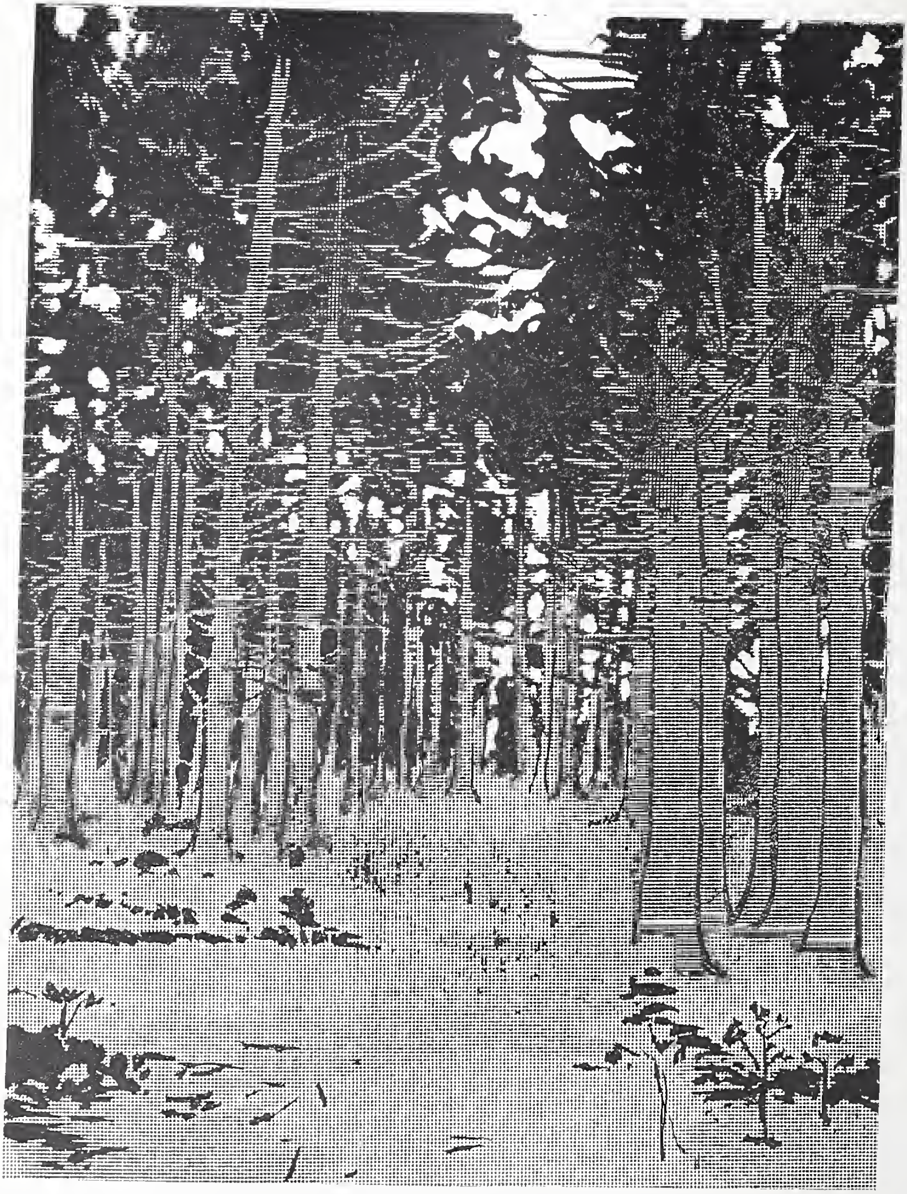
In the December issue I promised that, during 1903, I would make it my work to analyze very thoroughly the prize pictures so as to interest my readers more and more in the pictorial side of their hobby, believing that talks about successful efforts ought to be very instructive. As a teacher I have learned that a large secret of success in educating lies in frequent repetition of the same idea until, through the very frequency of the assertion, the idea has soaked into the mind and the effect becomes permanent. By criticizing the pictures each month I will be compelled to repeat the same idea again and again, so that the beneficial effects of repetition will be thereby gained, and while to the reader it may appear a little monotonous, it will, after all, be very effective.

I have often told my readers that when I have really wanted a thing I have always found it lying to my hand, and, while I was cogitating in my own mind what kind of a standard I would set before them on which to base my criticisms, I was fortunate enough to find in a magazine called *Mind* one of the best articles on art that I have come across for a very long time. It was delivered by the writer, Mr. F. W. Ruckstuhl, at one of these summer gatherings that are now so popular in this country, at Upland Farms, Oscawana-on-Hudson, New York, in July, this year, and certainly must have had a very beneficial effect on those who heard it. This article I reproduce elsewhere and would ask my readers to peruse it very carefully before reading what follows. The elements of artistic powers, it will be noted, he defines as being six in number, namely, conception, expression, composition, drawing, color and technic. In photography we are denied the power of working in color, but we must render color values and tone quality, and so we have almost its equivalent, and, therefore, in discussing the pictures, we can keep this end in view.



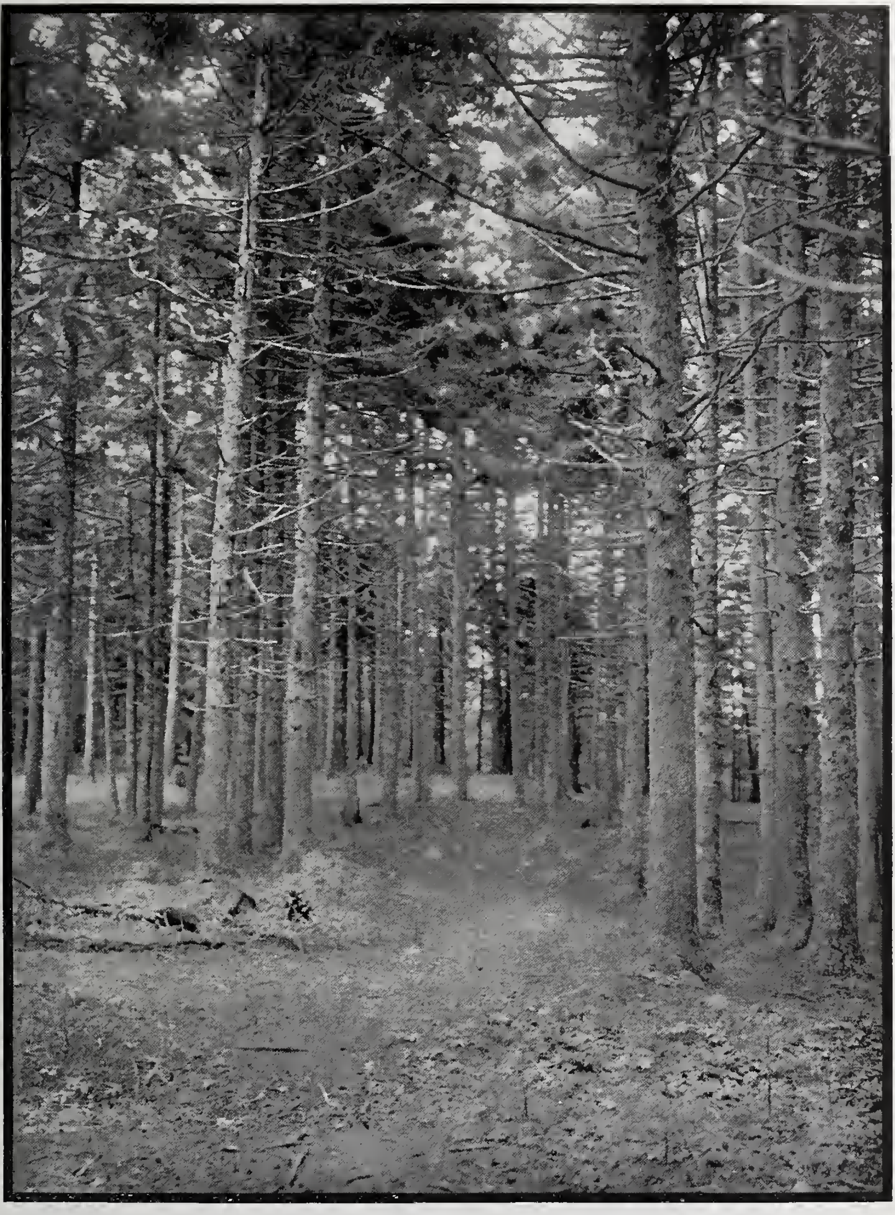
J. P. Hodgins, THE DUET. Chicago Salon.

In the talks I have in my office and in my correspondence with my readers who are anxious to advance still further



in the art side of their hobby, I find that the most difficult thing for them to grasp is the conception of mass. Almost everybody seems to have no difficulty in selecting really good material, but they fail to realize the hour of the day in which the lighting is the most effective. As a rule, detail is rampant all over the picture and the light and shade effects are not massed so as to be effective. In order to make this point very emphatic I have asked an artist to reduce each of the winning pictures to a skeleton form, working out the chief masses in three tones, namely, white, black and half-tone, so as to show that even in this skeleton form the arrangement is pleasing to the eye.

The first prize picture is a rather



John Chislett, Indianapolis, Ind.

FIRST PRIZE.

difficult one to analyze. Everybody knows the ancient rhyme,

> "I do not like thee, Dr. Fell;
> The reason why I can not tell."

In this picture the reverse is true. It is one that everybody likes, but it is rather hard to say why. The explanation, however, I think, will be found under the heading of conception and expression. We all dearly love the forest because of the deep, solemn note that pervades it. All around is perfect stillness and the trunks of the trees lead one's eyes and thoughts up toward infinite blue, with a vague feeling of the immensity and repose or goodness that is above, so different from our daily life, and the influences that surround us in every hour. It is, I think, this conception of grandeur, of solemnity and quietness that is the attraction in this picture. The roadway plays a very important part in the print. It shows us that there is something beyond the edge of the landscape that is visible just beyond the foreground trees, but it lends determination to our imagination, for just a little ways in it suddenly turns to the right and is lost and we wonder how it proceeds to find its way to the distant country that is vaguely suggested in the light foliage on the distant horizon. We at once see the relationship to our own life. A few yards ahead of this our path is visible, the rest is dim and vague, and we understand Carlyle's wisdom when he says, "The way to learn how to do things we see dimly is to do thoroughly those things that we see clearly."

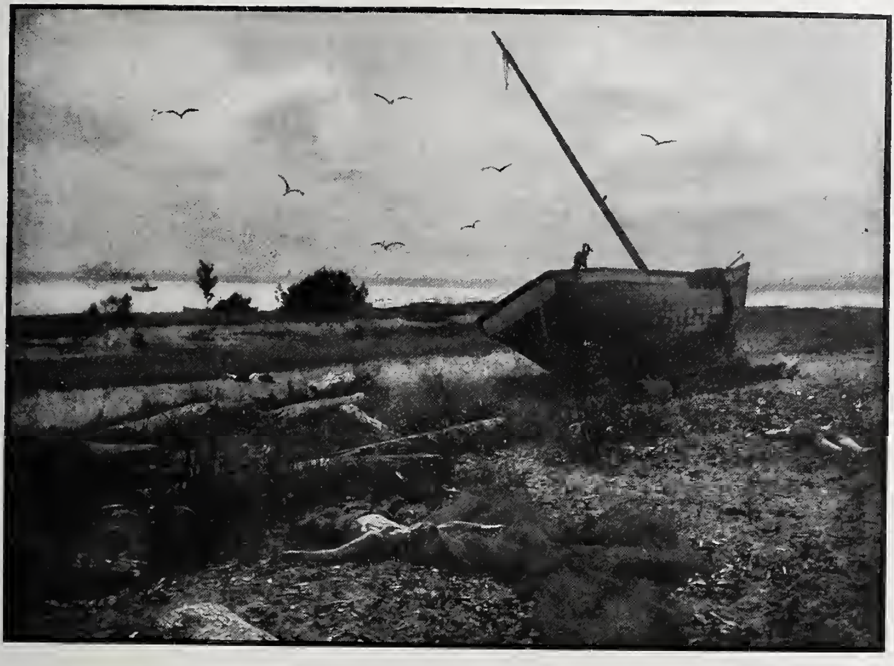
The composition here is very simple. The horizon line is placed very low so that the feeling expressed is all up, away to the finer things. The mass of black foliage toward the top of the picture makes a pleasant break, but it also serves to accentuate the feeling of lightness of the escape that leads us away up far above the material things before our eyes.

The soft quality that pervades this print is in accord with the quiet expression that is intended. The technical quality is practically perfection, so that in every way it is a very excellent picture by photography.

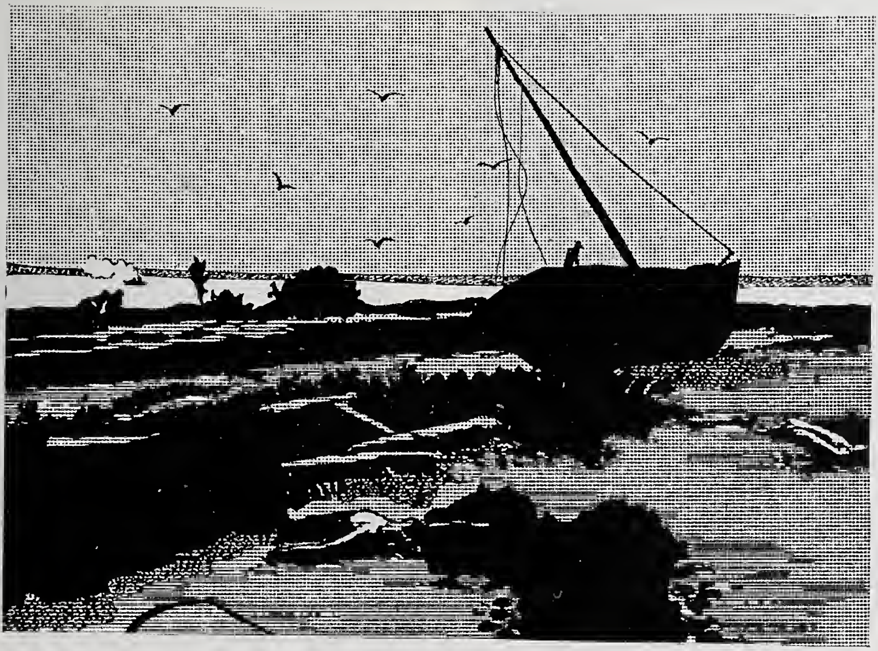
In the second prize picture the idea that is desired to be expressed is that of the devastation that is found after a storm. The dismantled ship, the bodies scattered around, the disordered masses in the foreground and the flight of the large birds, all tell the same story. The conception is rather a gruesome one, but it must be admitted that the expression of the idea is very realistic. The feeling of quiet is secured by the boat being tilted on its side, by the flat attitude of the bodies and of the logs and by the horizontal effect of the distant skyline, while the lingering clouds indicate the passing of the storm.

The composition is very simple in construction, being based on the zigzag scheme. The diagonal line, starting in with the logs and ending with the boat, is very cleverly manipulated at the left-hand corner, where it suddenly grows dark so as to prevent the eye getting out of the picture. As a matter of fact, the white spot on the breast of the body in the foreground catches the first glance. From there it travels by the logs to the boat which forms a turning point, and we now, in the most natural way, follow the white line of the water to the steamship, thence into the sky by means of the birds and again back to the ship on which the interest very naturally concentrates. The skeleton drawing will show how simple is the arrangement of the masses. The white of the water, the half-tone of the sky and the sand in the middle distance and in the foreground, while the foliage and the ship give the mass of black. The mast of the boat very cleverly connects the earth to the sky. The color value and technic is in harmony with the idea conveyed. It is a sad subject, something to be told, not in harrowing detail, but in a few short sketches, and so the low tone of the original print prevents the obtrusion of minutiæ that would be out of place.

The third prize picture is a very simple handling of a popular subject. The average reader can see at once that there are here practically only three tones, namely, the little patches of white in sky and water, the gray in the upper and lower parts of the picture, and the black of the clouds and vegetation. There is a fine, sweeping line that runs along the bank far out into the distance, taking a quick turn to the right, where it loses itself, but somehow we feel that it must again reappear in the little patch of white on the left, and the distant house on the horizon line suggests that somehow it must again be found there. The curve of this line is counterbalanced by the mass of weeds to the



Louis Fleckenstein, SECOND PRIZE. Faribault, Minn.



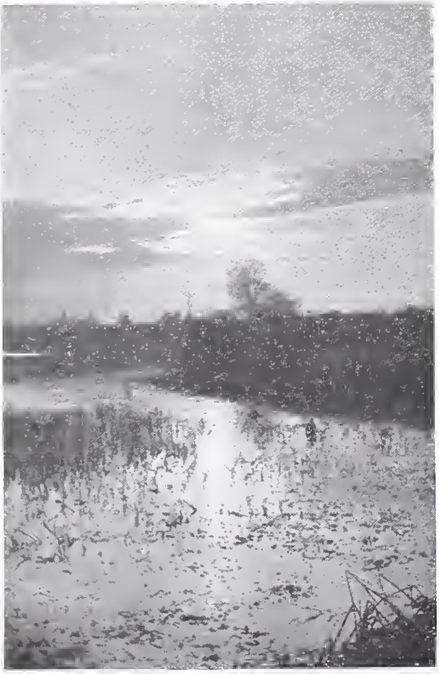
left, while the idea is repeated by the three patches of light which lead the eye from the middle to the left of the print and again back to the center of the sky. The clump of trees plays the same part in this print that the mast of the boat does in the second prize picture, i. e., it forms the connecting link between earth and sky. The feeling of repose which we always associate with sunset is carried out by the principal lines being horizontal, as can be seen in the clump of weeds, the line of the white patch on the left of the horizon and of the clouds.

F. DUNDAS TODD.

CHICAGO SALON.

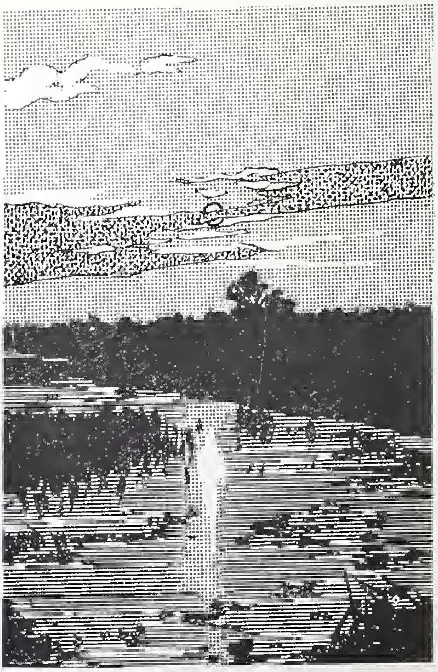
By the time this gets into the hands of the readers the exposition of the Third Chicago Salon will be drawing to its close and its value estimated by enthusiastic workers, but I believe that on every hand it will be considered both in quantity and quality as being very much ahead of that of last year. The jury of selection were apparently very rigid as to their standard, for only 191 prints were hung on the walls out of over 1,400 submitted.

Viewing the work as a whole, one is forced to a number of conclusions. On account of the keen agitation that has been carried on for a number of years in this country, there arose a popular opinion that fuzzigraph and Salon picture were almost synonymous terms, but in the second Salon in Chicago there were fewer fuzzy pictures than in the first, and in the third they are conspicuous almost by their absence. It would be rather difficult to find a good and sufficient reason for this change in the character of the work, but one may hazard a few guesses. In the first place it seems to me that photographers are realizing that it is possible to secure really good tone value and massing by strictly technical methods and evidently consider that fuzziness was an effort to attain this result by methods that were unnecessary. Again others might assume that the



W. H. Porterfield, Buffalo, N. Y.

THIRD PRIZE.



select coterie, whose headquarters are in New York, having of their own volition or for some other good and sufficient cause ceased to dominate in the American pictorial world, a great mass of the people have worked along the old lines most satisfactory to themselves and that once more history has repeated itself, and that a new king has arisen who knows not Joseph nor any of his set. In any event it would seem that their rule has fallen into innocuous desuetude.

As in the last Salon, the work of this school is conspicuous by its absence, and so far I have heard nobody confess to a broken heart as a consequence. It is evident that these individuals must either rule or die. They apparently must have things exactly as they want them or they won't play the game. But this is a pretty big world, in which no man is indispensable. We have managed pretty well to wiggle along since death removed from the world such men as Moses, Plato, Julius Cæsar, Martin Luther, Napoleon Bonaparte, George Washington, Lincoln, and all the other great men who did things, and we may assume in all probability pictorial photography will keep on its upward path, even although our erstwhile leaders are photographically dead though they may still cumber the ground.

Standing in the middle of the room and glancing at the general effect on the walls, one of the first things that catches the eye is the surprising number of gray effects, with here and there a few pictures in bright red. The former are by men who are masters in their rendition of tone value, the others belong to a more vigorous school, believing in broad masses.

In mounting and framing there are many noticeable features. The fashion of double and treble mounting seems to be fast dying out, and instead, the frames and mats are more frequently in a different tint of the color that predominates in the print, others in a color that is complementary to it. White mats are so few and far between that they form a very conspicuous feature on the walls, in fact, they not infrequently "kill" the pictures that are near them or are "killed" by them.

There is a very pleasant change in the character of the subjects. The first Salon was pitched in a note of sadness under the influence of the Eastern school. Low tones seemed to be the thing to aim at and so suitable matter for such effects was eagerly sought for, and naturally most of the pictures tended to make one feel doleful. This feeling was still noticeable in the second Salon, but in the present exhibition the joy of living predominates and one is less inclined to saunter around and talk with bated breath as if discussing the merits of some deceased friend whose remains lay before us.

Everything has its funny side and so has this. In the center of the long wall is to be found a very doleful looking portrait of Mr. Stieglitz, who, while unable to be present in works of his own creation, is nevertheless there in his counterfeit presentment and is evidently feeling very doleful over the pictorial degeneracy that meets his gaze. Let us hope he will have a quick recovery.

F. Dundas Todd.

BAUSCH & LOMB COMPETITION.

The Bausch & Lomb Optical Company, Rochester, New York, advise us that their action in advancing the date of closing their Quarter Century Photographic Competition to October 3, 1903, has met with very general approval among photographers, who realize the importance of this competition, and are anxious to submit as perfect work as possible. The special award of $300 as a grand prize for the photograph showing the best lens work of any submitted in the competition is attracting a good deal of attention among photographers, who seek to know the lens and its possibilities.

I can honestly say that in my opinion The Photo-Beacon is far superior to any magazine upon photography that I have yet run across.

W. A. Schrader,
Creston, Iowa.

BRIEF CRITICISM OF THE PICTURES.

Yarnell C. Abbott. His "Silence" is a very simple piece of posing in which white drapery is worked out into fine bold lines and small masses. All the others are in very low key in which a great deal is left to the imagination — too much, in fact.

H. P. Bailey is represented by a study of a profile bust of lady in which the lines and lighting are both pleasing.

F. C. Baker shows "Winter Twilight," which is, as with all his work in this nature, beautiful both in composition and in tone quality.

Mrs. Bennett's "In a Dutch Kitchen" shows a very good eye for composition and particularly so for fine tone quality. "Helen" is a very charming picture of a child, showing as pleasing light and shade effects as the other.

Curtis Bell in "Ravvy and Caddy" has one of the most charming cat studies that I have seen made for some time, in fact I thought so much of it that I bought it.

Francis Allen portrays "April Meadows" apparently just after showery weather. It is a piece of fine technical work, but its most pleasing feature is the fine rendering of distance on a flat meadow.

Sig. E. Berg is represented by "When the River is Low," a bit of fine photographic work as full of detail as the greatest crank would want, but with beautiful fine tone quality in the rendering of distance. Less satisfactory, however, is a portrait of Mr. Kort, in which the lighting has fallen from too broad a source upon the face, rendering it too evenly white.

Ralph E. Berger. "A Winter Landscape," which is very fine composition and full of very subtle gradation both in the white foreground and in the distant blacks.

George A. Blackman's "The Young Violin Maker" is a very satisfactory rendering of a difficult interior where the light falls from only one point, but notwithstanding, the print has a fine tone throughout and stamps Mr. Blackman as a master of technic.

E. M. Blaine has the only picture of "An Old Mill" in the Salon, but it well deserves being hung on the line as it is a very beautiful rendering of such a subject.

Carl Bjorncrantz exhibits two portraits and a gum print of a landscape entitled "Evening." The latter is full of feeling and poetic suggestion, but his portraits are less satisfactory.

Alice Boughton is represented by eight prints, half a dozen of which are practically nude studies, most of which lead one to inquire for what purpose they were ever made. Of this half dozen the most satisfactory is that entitled "Spring Idyl," a print worked out in a charming scheme of grays, in which the figures are so suppressed that they form part of the arrangement. The portrait of "Mother and Daughter" is a bit of good honest work of which any one might be proud to be the maker. In composition, lighting and technic it stands high. Another very good study in tone value by the same lady is "Beatrice."

Edward L. Bourke has scored quite a success in "The Pond, Evening, Winter," which is all that the title describes it and much more.

Annie W. Brigman is particularly successful with "Rachel," which is a picture that tells a sad story very strongly. It is in a low key, which is appropriate to the subject, but through which good tone quality predominates.

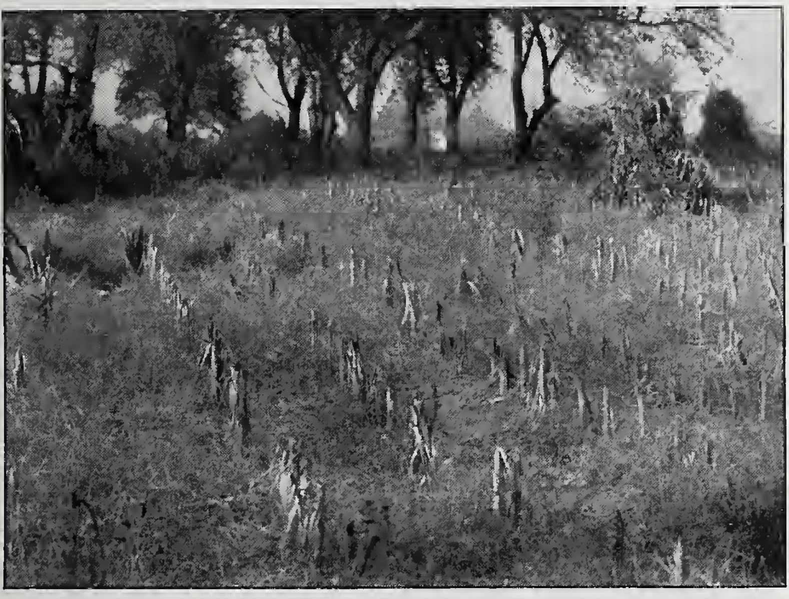
Sidney R. Carter has a very pleasing study of a head worked out in three tones.

S. Hudson Chapman tackles two very difficult subjects in the "Woodsman" and "A Bit of Licata." In the former, by very clever handling, he suppresses the spottiness which is very apt to be evident where strong sunlight falls upon leaves. In the street scene we have a very artistic bit of snap-shot work.

Alvin Langdon Coburn is evidently ambitious to be a portraitist of the new school. He is represented on the walls by portraits of Holland Day, Alfred Stieglitz and Mrs. Kasebier, all of which are emphatically ambitious, but to me not in the least satisfactory. I have never had the pleasure of meeting Mr. Day, but I am very familiar with the other two, and he certainly fails to come within a thousand miles of representing them as I know them. Mr. Stieglitz, according to Mr. Coburn, habitually suffers from a fit of the blues. It is possible that the portrait was taken at the moment when Mr. Stieglitz felt that all his efforts for art in American photography had been in vain and had come to the conclusion that life was not worth living. I am glad to be able to inform the public that Mr. Stieglitz has got a long way beyond that stage, for I saw him last in the month of November, and he was in the most buoyant mood that I have ever seen him enjoy, and I think he ought to take out a writ of injunction against the exhibition of this caricature of himself. Mrs. Kasebier is one of the most interesting women that I know, so strong in mental fiber that she does not need to pose as being haughty and suspicious, and as a matter of fact, never does, but this is evidently Mr. Coburn's conception of her.

Edgar A. Cohen, in his landscape-work, has three very charming bits of work, all of them difficult subjects but well rendered. In his figure study he is less happy, the whites of the print being rather raw.

Dr. F. Detleffsen. All of his work bears one feature in common — very vigorous blacks and whites, but these are linked together by very clever gradations, the result being really very pleasing pictures that carry well and are pleasing to the eye many feet away.



Theodore Eitel, Chicago Salon.

AUTUMN.

J. W. L. Dillman is represented by a sunrise picture that is very simple in arrangement and as simply treated.

George Donehower is represented by four subjects, of which the best in my mind is "The Foggy Day," which is good in arrangement and effect. His figure studies are very simple in line, but lack gradation.

William B. Dyer is one of the biggest exhibitors in the Salon and all in all his work is very satisfactory, showing a big advance over that of last year. He has apparently been able to get over the foggy stage of the high art disease and is now able to combine beautiful linework and fine tone quality with good technical photography, and the result is some of the most charming pictures on the walls. While it is hard to single out any of his work for special mention, it will, I think, be admitted that his portrait of " Master Curtis " is all that a boy's picture ought to be, and the same might be said of " Dorothy." In "August " there is a very skilful rendering of a face against the sky, a decided proof of his mastery of technic.

Sarah Eddy has a portrait of a group, " Mother and Child," which is poor in lines but very good in tone quality.

Theodore Eitel possesses the secret of working in gray, and both his pictures —" Winter " and "Autumn "— are delightful bits of photographic work.

A. W. Engel has two pictures on exhibition which are strictly photographic in effect according to the old acceptance of the term, but he wins his position on the walls by fine composition, showing that he has good taste in spacing and lines.

J. H. Field is represented by five pictures, all of which are characterized by the broad massing and agreeable spacing that has been the characteristic of his work. His landscape, " Evening Effect," is one of the simplest and most poetic pictures in the Salon and it holds out great promise for still further advance on the part of Mr. Field.

James H. Forsyth is represented by two winter scenes which are characterized by very simple arrangement. Perhaps there is nothing simpler in the whole exhibition than these, yet they are both very effective.

Milton Franklin exhibits two landscape studies and one portrait picture, all of which are characterized by broad, yet vigorous treatment.

S. L. Gates. The strongest portraits in the Salon are possibly those by Mr. Gates; No. 75, the portrait of a Chicago artist, being decidedly good.

Frank Green. Mr. Green is represented by three landscape subjects, all of which are characterized by fine arrangement and good grouping of masses and low tones.

O. H. Hansen's " Morning Reflections " are rather low in tone.

S. Stockton Hornor has one portrait and one landscape subject. The former is the old, old story of a young lady blowing the petals from a flower in order to solve the great problem " What O'clock Is It? " The beauty of the picture, however, lies in the very dainty gray effect in which great attention has been devoted to securing fine free flowing lines. The same remarks apply to " Frosty Morning."

H. Hendrickson shows a good eye for tone quality in his two landscape pictures, but I think they suffer decidedly from the broad expanse of white mat that surrounds them.

I. P. Hodgins. One of the most popular pictures in the Salon will undoubtedly be " The Duet," by this gentleman. It represents two little girls, singing with a vast amount of zeal and fervor that is infectious. The arrangement is conventional to the last degree, but the little details that are essential to variety are present and the result is a big success. His landscape picture is just as simple, but not so good in values.

Dana Hull exhibits one print which is a very ordinary example of photographic " Rembrandt " portraiture. In my opinion it really did not deserve to be honored by a place on the walls.

William F. James' "A Portrait of Mr. B." is a very strong piece of work along the lines of good photography. The landscape, " Near Dartford," is bold and vigorous in treatment, although rather symmetrical in the arrangement of the masses.

Meredith Janvier is represented by two portraits which are rather good in arrangement but foggy in effect.

L. Hamilton Keller's "A Newsboy at Night," is a very clever night picture which is very simple in its arrangement, but effective in its lighting.

Louis A. Lamb has three very broadly treated gum prints which prove his keen conception of massing, but which at the same time revel in essential detail.

(To be continued.)

THE GREATNESS OF ART.*

It would seem almost useless at this stage of the world's progress to discuss art in public, such is the amazing difference of opinion about what is a really great work of art. But, since all our intellectual life is made up largely of reworking old thought into new forms, the merest drivel about art, if serious drivel, must be interesting. For, in the last analysis, the two most respectable things in life are Love and Art.

E. M. Blaine, Chicago Salon.

A RIFT IN THE CLOUDS.

There is a universal desire to know the superlative of everything in life, especially in art; and, no matter how futile it may seem to seek a fixed standard by which any work of art may be judged, men are ever bent on finding such a standard. Therefore, any serious discussion of art, having in view the finding of such a standard, must be instructive.

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* Substance of a lecture delivered at Upland Farms, Oscawana-on-Hudson, New York, July 30, 1902.

When at thirty-two I arrived at Paris to study the technical side of sculpture, I soon found such a variety of schools, fads, and " isms " that I was bewildered. There were Realism and Impressionism, Idealism and Materialism, Plein-airists and Rembrandtists, etc. There were those who said Velasquez was the only Painter and Falguiere the only Sculptor, and others that Bouguereau and Dubois were the only ones who followed the true path. To find for myself a standard amidst this labyrinth of systems, therefore, became my first task.

Before going to Paris I had twenty years of solid study back of me, and I arrived there with a half-fixed point of view. After three years more of study and interrogation of some of the greatest artists there, my point of view became fixed, and I have never wavered since. Two years ago, after twelve years more of reflection, I succeeded in reducing my point of view to a formula. That formula is as follows: Every human work made with the purpose of stirring human emotion is a work of art, and a work of art is great in ratio of its power of stirring the highest emotions of the largest number of cultured people for the longest period of time.

Practically speaking, we are made up of a body, a mind, and a soul. We exist in the body but really *live* in the soul, the mind being a mere tool of the soul. The really important thing in man is the soul, not the mind: what we feel, not what we think. In short, man is above a savage in ratio of his hunger for emotional activity of the highest kind and his capacity for experiencing such emotion. The query now is, What is an emotion; and which are the highest emotions of the soul?

There is a vast difference between a feeling and an emotion. A feeling is that which concentrates us upon ourselves and keeps us imprisoned within ourselves — such as sadness, remorse, envy, vanity. An emotion is that which takes us away from ourselves and lifts us toward the Infinite — as joy, reverence, wonder, awe. There are, roughly speaking, two classes of emotions — intellectual and spiritual. The intellectual emotions are serenity, wonder, laughter, sympathy. The spiritual emotions are joy, reverence, awe, adoration. Hope is the lowest emotion because it contains a large element of self-interest. Adoration is the highest emotion. It is so because it takes us absolutely away from ourselves. Adoration is that state of being in which we have given ourselves in spirit, to some person, or cause, or thing, so completely that all desire of self has been lulled to sleep and the soul feels transfigured and released from earthly bondage, and, if only for a moment, mounts toward the empyrean and makes us feel we are nearer the Infinite.

The greatest power to exalt the souls of men is possessed by the Poet, whether be he a singer like Homer, an orator like Lincoln, or a play-writer like Shakespeare. After the Poet comes the Musician, then the Architect, then the Sculptor, then the Painter, and then the Prose-writer.

One of the astonishing things that met me in Paris, when first I arrived there, was the contempt of many of the American artists for the old masters and their extravagant admiration for the modern works in the Luxemburg. However, a few of these young artists, as soon as they had learned enough of the technical tricks necessary to entitle them to call themselves good painters, could hardly be induced to waste much time away from the old masters in the Louvre. For there they found something higher than mere technical tricks. They found grand conceptions full of lofty thought and ennobling sentiments. The same was true of the sculptors.

Now, there is abroad also in this country a tendency to talk and work in all art from the standpoint of "Art for Art's sake." In other words, those who preach art for art's sake claim that it makes no difference what the subject is in a work of art; but that so long as a work of art is well done technically it is great. A prominent New York painter lately said that "if one could properly paint a howling dog with a tin can tied to his tail it would be a masterpiece." To me this is the most vicious standpoint possible for an artist to take. And I prophesy that so long as it prevails in this country so long will American Art remain on a level of mediocrity. And if I am here to-day at all, it is that here I might do my share to protest against this material point of view.

The chief argument of the art-for-art's-sake school is that it is the function of a work to "charm." I agree that to charm is one of the great functions of art. But I claim that it is the function of art to amuse, to interest, to instruct, to soothe, to inspire as well as to charm. But after all the highest function of art, from a drama to a cathedral, from an oration to a statue, is to thrill the soul — to set in vibration the loftiest emotions of our being.

Among all the civilized and half-civilized peoples of the earth there is a universal agreement, by instinct, as to what is superlatively beautiful in many things. Shakespeare says, truly, "One touch of nature makes the whole world kin."

If you go to the Musee Guinet, the museum of religions in Paris, and study the different statues of the gods and goddesses and the different types of beauty, male and female, used by the different nations, all over the world, to express their ideal as to what is an adorable head of a god, you will find that, in general, the features, independent of the head-dress, approach more or less the Greek classic.

Edgar A. Cohen, Chicago Salon.

ON THE ROAD FROM THE PASTURE TO THE BARNYARD.

In China there are all kinds of noses, for example. But no Chinaman will ever put on the head of any god or goddess, that is to be adored, anything but a straight or a slightly aquiline nose. The same is true of the Hindu, the Siamese, and the Japanese. You will find also that those women who are universally considered beautiful — and there are such — approach closely the classic type: thus proving that the classic is the real beauty, the universal standard by which all beauty is and must be judged. And no female head can possibly be called truly beautiful that does not closely approach the best classic type. That is not my personal opinion merely — it is a law of nature.

What all men long to have is a practical standard by which to measure any work of art. Let us see if I can give you such a measure, based on my point of view. The highest standard of art is that based on an equation of all standards; and that is Power. The elements of artistic powers are six: Conception, Expression, Composition, Drawing, Color, Technic. Of these the most important is the element of Conception: first, the originality of the conception, and second, but above all, the elevation and nobility of the plane on which the idea or sentiment or story is to be technically carried out.

The question now arises, Which is the highest plane of thought and artistic activity? Briefly, it matters not whether you are an agnostic or a dogmatic theologian, history proves that religion — that is, the desire to find and adore God, or the Good — is the everlasting longing of the soul. It is the chief occupation of the race. Therefore, without more words, I assert that *religious* art is the highest of all forms of art; for it deals with the loftiest interests of mankind and gives the largest scope for the exercise of the highest intellectual and spiritual faculties of man.

The next highest class is Ethical Art — that in which an effort is made to influence men to higher conduct, like Falguiere's grand statue of St. Vincent de Paul, Rude's glorious bas-relief of the "Marseillaise" on the Avenue de Triomphe at Paris, and Couture's sublime picture of the "Decadence of Rome."

The next highest is Allegorical Art. It is almost equally high with ethical art, and offers almost as much opportunity as religious art for lifting mankind to the realms of poetry. But it is particularly fitted to stimulate the hope and best ambitions of men, or to soothe them in sadness and nerve them through the trials of life.

Then follow Historical Art, Landscape Art, Portrait Art, Genre Art, then Still-life Art, which is the lowest form.

The second most important element of art power is Expression. The end of all technical effort in art is to express *life*. The more any work of art pulsates with life the more does it thrill us. If the life is merely material in form, it charms the mind; if it is spiritual, it stirs the soul. Now, it is difficult enough to express real life; but to express ideal life is still more difficult. To carve a head of a god like the Jupiter Otricoli, or draw such a head as Leonardo's Christ, is the highest manifestation of artistic power of expression; for in these heads the great artists realize for us godlike or transfigured life.

Composition is the next most important element of art power. On this subject volumes have been written. The elements, lines, and forms of composition are endless, and there are all sorts of rules. But there are a few laws of composition that may be applied to every work of art. For example:

(1) All meaningless things in a composition are bad.

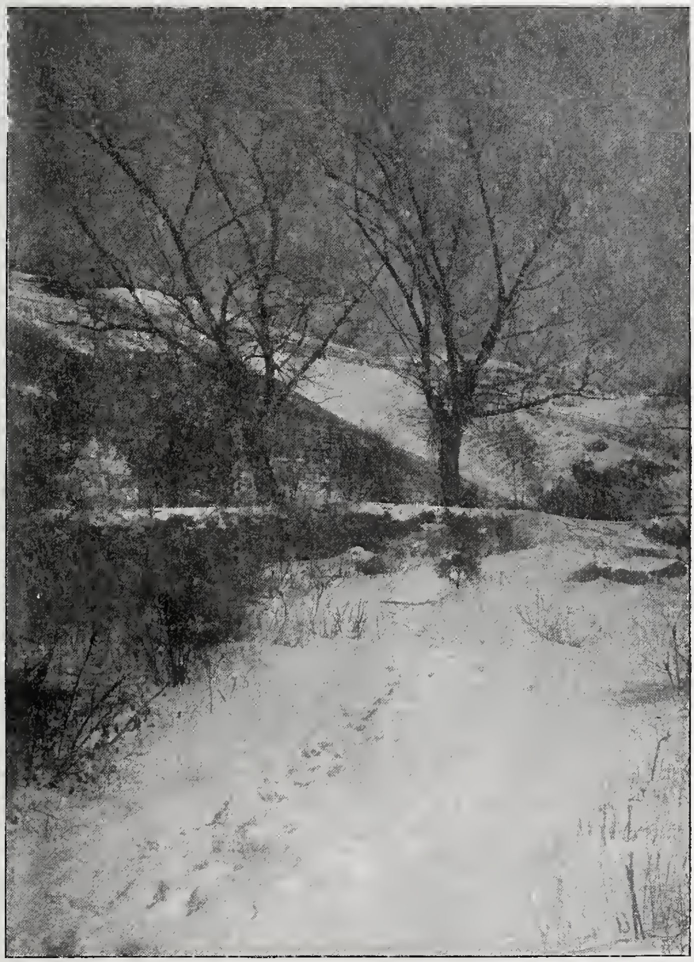
(2) All the parts of a composition must be subordinate to its main purpose. Thus in a statue the eyes are the most important, and anything that hinders the mind from rapidly going to the eyes is bad.

All parts of a composition must lead the eye to, and aid, the main part. Anything that fails in this is useless — therefore bad.

The arrangement of lines and masses of forms is the object of composition. On this arrangement depends most of the beauty in any work of art, and too much stress can not be laid upon this point. So true is this that the art-for-art's-sake people find in this one of their strongest arguments. However, Raphael composed a number of Madonnas, even more beautiful in composition than his "Sistine Madonna," but, lacking a child that looks as if it might have been the real young son of God, they fall into the second class in spite of their composition being finer than the "Sistine Madonna," thus proving that Expression is higher than Composition. There are horizontal, perpendicular, circular, oval, and elliptical compositions. But the greatest element of composition is the Pyramidal. The muscles of our eye are so arranged that of all the forms of nature a pine tree, a cone mountain, or a pyramid gives us the greatest visual pleasure and most powerfully lifts us upward; and all the greatest works of plastic and graphic art are pyramidal in composition.

After composition comes Drawing in importance. There are many kinds of drawing. Some men draw in a manner so faultless, like Bouguereau, that the mind finds endless pleasure in contemplating his skill. Others draw with such simplicity and lack of detail that they seem to have done it with an axe, like Puvis de Chavannes in his grand frescoes. Between the two perhaps lies the true path.

Color comes next in importance, in my judgment. Raphael's "Transfiguration" is not as beautiful in an engraving as in the original. But if we lost the original and retained a good photograph we would still say it was a great picture.



Ralph E. Berger, Chicago Salon.

WINTER LANDSCAPE.

The art-for-art's-sake people make a fetish of color. Because tone and color are the greatest technical difficulties in painting, when a young artist sees another who easily surmounts these difficulties he falls down and worships and calls the brilliant technician a great master. Later in life, when he has new perceptions and grander ideals, he will know that color is not of supreme importance.

The least important element in a work of art is Technic. The question arises at once, What is technic? Technic in sculpture means the modeling of the surface in a peculiar and personal manner, and the leaving of certain kinds of dabs, strips, or scratches or thumb-marks, supposed to be interesting in color, in light and shade. Technic in poetry means the choice and arrangement in a peculiar, personal way of certain kinds of words, meters, and rhymes. Technic in painting is the manner or trick of putting on color in one way or another.

When a work shows a strong, simple but effective technic, charming color, and fine drawing, but is defective in every other way, it has already a claim on our profound respect. But it drops in the scale of excellence just in ratio of its being weak in one or more of those six elements of artistic power I have named. Per contra: That work of art which shows the sublimest Conception, the greatest Expression of life, the finest Composition, the most virile Drawing, the most charming Color, and the most effective Technic, is the greatest work of art in the world. This is a practical working measure. By this measure we can judge every work of art, no matter what its nature, because the fundamental laws of art apply to *all* art, whether Music, Sculpture, or Poetry.

A great artist can not help being individual, struggle as he may. For, as Goethe says: "The artist, make what contortion soever he will, can bring forth only his own individuality." Whatever the personal character of an artist may be, it will inevitably show itself in his work. If he starts out with a lofty purpose his work will show it. If his soul degenerates his work will degenerate also. Falguiere was an example, and there are others.

Modest, reverent endeavor to enrich the world with a sublime creation is the first mark of a supreme artist. Second-class men do not know this; hence, we are forced to endure oceans of mediocrity, most of it addressed merely to the mind. For in the long run of years all works of art addressed to the mind alone — the mere valet of the soul — will surely be relegated to that large lumber-room where we gather the curios of our national art life.

Do not imagine I am a pessimist, or in despair. The fecundity of the American mind is so great that it astonishes the world. It will be so in art. It is now merely a question as to which path we shall choose; for not all poetry is dead. And we already see the aurora of a time when our fair land will be the home of a grand art. But, in order to insure and hasten that epoch, I would teach an art philosophy of the highest kind in every school: not to make more artists, but fewer and greater, and to give to every citizen the key to the world of art and to teach him what is really great in art. Unless we adjust the national conscience in harmony with the loftiest ideals we can not expect the appearance of great genius in our art: for a nation obtains exactly that which it most earnestly prays for — most surely without fail.

Let us, therefore, "hitch our wagon to a star"! Let us teach throughout the land that, after all is said, the highest art is not that which is only clever and merely charms the mind, but rather that which is poetic and sublime and elevates the soul.— *Mind.*

F. W. RUCKSTUHL.

THE EAGLE.

A glance at the back page of cover would suggest that it was the same old advertisement, but as a matter of fact it is a new one, in proof of which note the date that is under the biggest bird. The biped is now fourteen years old and still growing, and at no distant date it will fill up the whole of the space and leave no room for its shadows of the past.

OUT OF THE MAIL BAG.

SEATTLE, WASH., Nov. 20, 1902.

MY DEAR TODD,— It was slow in coming, but finally the 22d of August came along. At 6:30 the train left Chicago. It conveyed Mrs. R. Martin, accompanied by Mr. ditto, also some baggage and no regrets. The geography and topography moved along swiftly under the cars, and, after three days and three nights, Seattle was displayed. The car is now elsewhere, but Seattle is here.

H. Hendrickson, Chicago Salon.

WASTE LAND.

This is a good photograph town, but it is peculiar in this, there are but two types of lenses that can be used successfully here: one is a telephoto lens and the other is a microscope. It is all hills. You are either on top of one of them, and then the telephoto, or you are where you can see nothing but the hill forninst you — and then the microscope.

The hills are great. Nobody wears a long-tailed coat out here, for, in walking uphill encased in such a garment, he would certainly tread on the tail of his own coat unless he gingerly levitated it like a Chicago miss shying at that rainy-day puddle on the corner of Madison and Fifth avenue. They cog the sidewalks on most streets as a measure of safety and work the trolley lines with counter weights. In crossing a street anywhere in the middle of the block you side-step it or go lopsided, and in going down hill you just let go and presently you are there.

The climate is elegant, though; no snow or frost — only rain, rain, just rain. In some respects it is like Australia. In Australia the cherry pits grow *outside* of the cherry; here, they grow *inside* — see the similarity? But, come to think of it, that was not the point of resemblance though; here, in the long, dry days of summer, rheumatic people (people, that is to say, who were rheumatic in Chicago or in some or any other Eastern city) sometimes have twinges of their paramount physical plaguer, but in the rainy reason *bacillus rheumatismus angio gigans* copies after the bear of Minnesota — he hibernates — anyway, he disappears, and the sloppy, thud, thud, swish and splutter of countless billions of tons of raindrops is, each of them, a tinkle of joy to the rheumatator.

See the topsy-turvyness of it? The Australian up-side-downity?

I brought along a sample chunk of lumbago, just as an experiment (you know how I like to experiment, and, besides, I forgot to leave it when I started) and when the rains came it melted and I ran.

I used to wonder why it was that developing paper was more popular on the coast than it is back East. Now I know — I have had a piece of soline cloth out under a negative now for two days and I expect that I will have to finish the print with pen and ink, and soline is not a slow printer, not by a demijohn-full.

One day during the forest fire time, a couple of months ago, Asahel Curtis, one of the best landscape photographers on the coast, exposed an extra rapid plate for thirty minutes through an open window on First avenue. The result looked like a rejection in one of those "night scenes on State street" contests. The exposure, at that, was made at two o'clock in the afternoon. That same day, when I came down from lunch (slid down) I brought an eight-pound volume, a treatise on petroleum and its products, thinking that perhaps I could do a little studying. I laid it down on my desk. I did not read it — had to light a match to find the book. It was surely dark that day. At two o'clock the cocks crew and all day and night the cork-screw. Too dark to *work*, but the barrooms were brilliantly lighted. Photographers changed plates or filled plateholders in the printing-rooms at midday — the atmosphere was about the tint of an Isochrom ray-filter dipped in mud — and not a plate in town got fogged.

M. F. Boice, who is running the Dingman gallery on Columbia street, made the only portrait exposure that was made in Seattle that afternoon. It was of a male person who had been contributing liberally to the internal revenue fund through a barroom collector. He was propped up in a reclining chair and assisted, with ether, to sleep from 1:30 to 4:30 while a mammoth portrait lens at full aperture was directed at him.

It took forty-five minutes to develop the plate and then nothing showed up except a blur that resembled the nebula in Orion. At first this was thought to have been caused by vibratory motions that snoring had imparted to his well-tinted nose, but, on second thoughts, we decided that the color of said nose, seeing that it was red, was decidedly against such an assumption, and we have concluded that his breath must have been full of boozian waves (which are known to be more actinic than the Hertzian variety) — it is certain, anyway, that if a smellograph machine could have been substituted for the camera, a plate, or even a platter, would have been surcharged with records.

Down East, say, for example, in New York city, the average dealer in photographic supplies orders developers, toners, etc., from the manufacturer in lots of 1-12th dozen and then wants to know if he can get a broken package, as one or two of his customers would like to get a cent's worth, assorted. In Chicago he will occasionally stand for a whole dozen at one time. Out here on the coast he orders in gross lots *and he orders often*. There is nothing decadent out here — it is all dekkodent (from *dekko*) — it is a ten-times winner. Harrowing the field or harrowing the soul — it is all the same — apparent obstruction only makes improvement more vigorously insistent. With six months, more or less, of rainy season as a photographic soul-harrower, this coast region is the best photographic district in the United States.

Five to seven dollars a dozen for cabinets; the commercial photographers working in eight-hour shifts; Anderson Supply Company having its building enlarged; all of the other dealers receiving the humble bow from the bankers — yes, Seattle is a good photograph town.

The people buy, borrow, beg or steal THE PHOTO-BEACON — they get it in some way or other and THEY READ IT.

Yours Seattled,
RALPH MARTIN.

MORE CARE WITH THE RED LIGHT.

For a long time I had been troubled by thin, flat plates, and I could not find the reason. In vain I varied my exposures and tried experiments in developing. The results were much the same. Then I looked with distrust on all my materials in turn. Something might have become spoilt in my possession, or even been old or spoiled when bought. So I cheerfully threw away my chemicals and procured a new supply and then patiently tried different brands and speeds of plates. All this, although I do firmly believe in the wisdom of the amateur who sticks to one thing, whether in plates or developer. But I had the same results. If a negative came very quickly it would sometimes have good printing qualities, but generally they would begin to fade almost as soon as the image began to show, and I dared not keep them in the developer long enough to gain sufficient density. And no amount of intensification would give a satisfactory plate. I became disgusted with the waste of time and energy, to say nothing of good material, and so lost my interest in photography that I did nothing at it for some time. Then we moved and a new and convenient darkroom tempted me to try again; the same results — intensified. I decided there *must* be a reason and I *would* find it. I must say that all this time the "ingenious" one of the family who could generally come to my rescue when I failed, was all this time having fair success with his plates. But he could not seem to help me, though he gave me many hints. Finally, he laughingly told me it must be *me,* which I think was really the last straw which determined me that I would find the trouble. Now, I could not believe it was wholly lack of skill on my part, since I had had some small success before this particular trouble began. And so I looked about me to see whether the conditions under which I worked were different after we moved, as the trouble seemed greater after that. The red light certainly was different, and I began to suspect that. For, although I was not quite sure what fog was, my photographic knowledge having come chiefly from experience, I thought my plates might be fogged. Well, I decided to test all our red lights. First I tested the small window in our new darkroom. The window was duly fitted with red and orange glass, as usually recommended. I exposed a plate, covering half with black paper, in front of the window for a short time and developed it in the dark except for occasional peeps. The results were astonishing. I had obtained a negative having considerable contrast. Then I tried the red lamp I had used before moving. I exposed a plate one and one-half minutes and obtained the negative or rather positive from which the accompanying illustration was printed. Half the plate I covered with a small negative and the other half I covered diagonally with a piece of black paper, leaving a

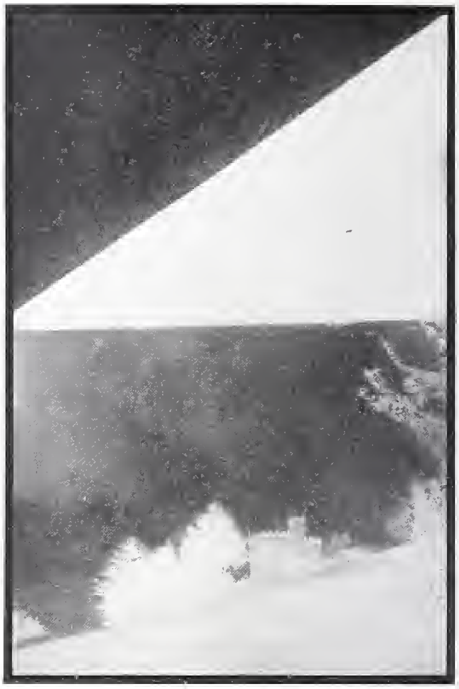
Annie W. Brigman, Chicago Salon.

RACHEL.

triangle next the small negative uncovered. Then, holding all as firmly together as I could I held it parallel with the red glass, which was backed by yellow glass, and about four inches from it.

When I thought it over I realized that I had been very careless with the red lights. I had supposed a red light a perfectly safe light and had acted accordingly; had taken my time when filling plateholders and had developed as near the red light as I could place my tray. I remembered that with our first very modest outfit I had had but little of the difficulty which had haunted me with ever-increasing frequency as our source of red light improved. I wonder now whether my occasional successes might not have been due to a providential veil of smoke on the inside glass of my lamp, for it was a favorite trick of mine to turn the light as high as possible, only to find, in a few minutes, that it was smoking furiously and must be promptly turned down. And I shall have to confess that I did not clean the lamp very often, always being much surprised when I did clean it at the amount of soot which had invaded it. Now I develop in the dark as far as I can, just as I developed my tests, taking only occasional peeps at the process, and have no longer any trouble with fogged plates.

In a recent magazine I read a piece touching this very subject, but taking the opposite view, and written, I should judge, by a professional. It stated that one need not be so very careful of red light and even gave one the impression that a little of most any light could do no harm, but I noticed before the end of the piece that the writer said he developed eighteen inches from the source of light. How many amateurs would think they could see anything at that distance? Not many, I think. If one works by a red light a great deal, no doubt he becomes accustomed to it and can see quite well with very little light, but to an amateur who only spends a short time occasionally in the darkroom, the best of red light seems almost no light at all and he unconsciously makes the most of it and crowds his utensils where he can see them best.



I would say in closing that I think many magazine articles leave too much to the supposed knowledge of the reader, the photographic common-sense of the reader, we might say. And really I think few amateurs have any to begin with, though I am not ready to believe there are many like the young lady of whom I have heard who loaded her first plates in broad daylight and then proceeded to expose them. Yet we of some experience may at times and at some stages of our work use as little photographic common sense.

ELIZABETH D. GRIFFIN.

I HAVE read No. 1 of the Dime Series of photographic hand-books over and over, and I must say I have never found so much food for thought in such a little book. In the last few months I have spent between $10 and $15 for books on photography, but this 10-cent pamphlet, or rather booklet, is worth more to me than all the others combined.

IVORYTYPES, AND HOW TO MAKE THEM.

BY J. W. TAYLOR.

CHAPTER I.

OF INTEREST TO AMATEUR PHOTOGRAPHERS.

Having some years since joined the ever-increasing ranks of amateur camera devotees, and being an enthusiast and student on the subject of photography, I have, from my own experience and the handling in my vocation of standard photographic journals, arrived at the conclusion that to be able to produce a beautiful and lifelike portrait is the acme of the amateur's desires.

Mrs. James E. Bennett, Chicago Salon.

DUTCH KITCHEN.

It is with this very end in view that this series of articles on "Ivorytype Portraiture" is placed before the readers of the PHOTO-BEACON. Every amateur photographer who may peruse these chapters will at once recognize in this art an open sesame to new departures and further triumphs, likewise proving a solution to various problems vexing the average worker in photography.

By one possessing a camera and, it is

assumed, the taste and ability requisite for fine portrait work, the art of Ivorytype-making may be easily acquired, and by following the instructions herein presented, at very little additional expense. You have the prints — hundreds of them, maybe — you have the glass; the rest is a mere trifle.

And right here I wish to speak of the solution of problems reverted to above. First, most amateurs have no doubt bewailed the fact that the acquirement of the knack of retouching was impracticable or beyond their opportunities; and all have acknowledged the desirability of being able to retouch and strengthen — sometimes correct — the product of their camera. In working a print over into an Ivorytype, you are given this opportunity, and in so simple a manner that most any one with any talent at all can, with very little practice, bring out a portrait just to his liking, *with this difference:* In retouching, you work from the *front* or *face* of the picture; in Ivorytypes you work from the *back*. You will understand this further along.

Second, you have doubtless often been puzzled as to the possible utility for any purpose of your spoiled or rejected plates. Ivorytype work solves this riddle, for you can utilize all you have in this process, especially for landscape and interior scenes. Best confine your portrait work to the concave glasses, as from them the best results are obtained.

Third, while none of us can as yet depict with our cameras the natural tints and colorings of the subject photographed, one can in the Ivorytype reproduce it faithfully to any degree he may desire. And in doing so he finds use for the inevitable accumulation of unmounted prints which ordinarily he is loath to destroy.

Before passing to the chapter of instructions, I wish to state positively and emphatically that the process of which this article treats is *permanent and unchanging,* and any portrait worked into an Ivorytype is thus rendered impervious to the ravages of time and may be kept perfect a lifetime. They are sealed hermetically as it were and can not change. I have some in my possession done twenty-two years ago, in as fine color and condition as when first made.

INCREASE IN TUITION FEES.

EFFINGHAM, ILLINOIS.

Mr. F. Dundas Todd, Chicago:

MY DEAR MR. TODD,—We are pleased to announce that on March 1, 1903, the tuition fees of the Illinois College of Photography for the two and three year courses or life scholarships will be advanced to $250.

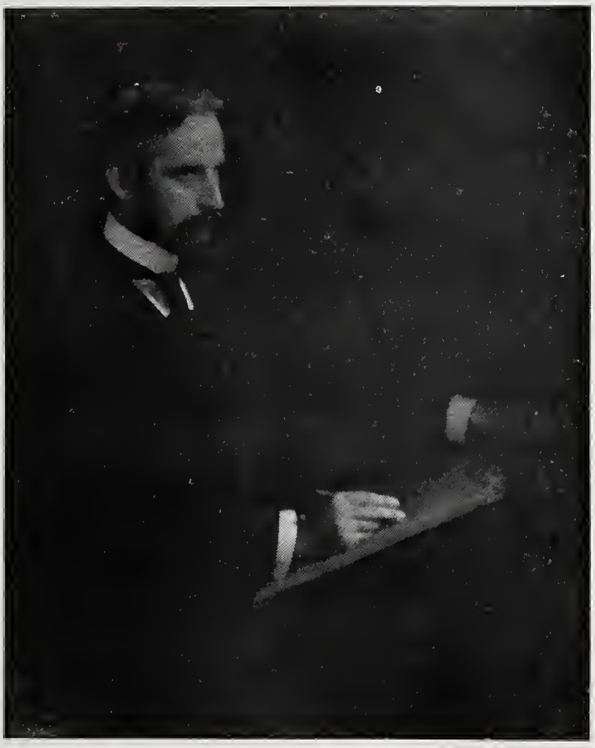
They will also be increased every few months thereafter until they reach $400, at which price they will be kept permanently.

It is our desire to make our college a recognized institution of learning for all classes, and to do this we are constantly on the alert for new ideas and efficient instructors to put these ideas into effect. These additions to our curriculum and faculty naturally make the course much more valuable to the student and expensive to the institution, hence we feel that our efforts should be encouraged both financially and influentially.

Will you please make mention of this in the next issue of THE PHOTO-BEACON? Thanking you in advance for the favor, we are, Yours fraternally,

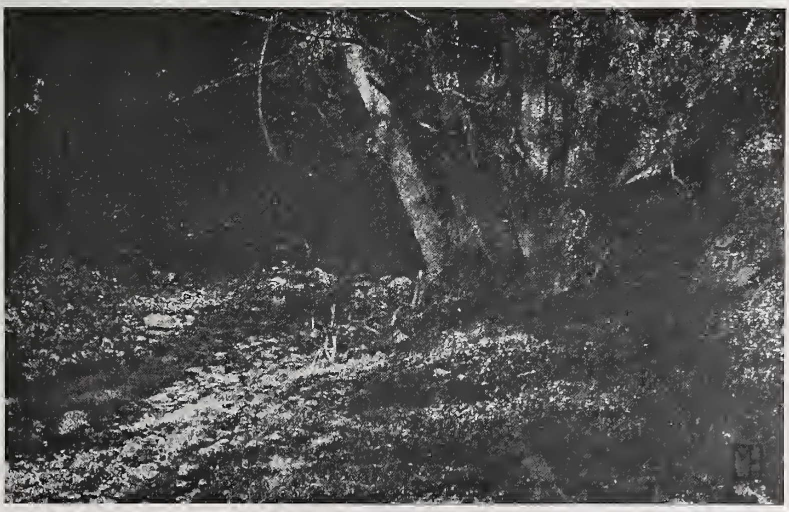
ILLINOIS COLLEGE OF PHOTOGRAPHY,
PER L. H. BISSELL,
President.

A VISIT to a plate or paper factory results in many practical hints which are of much value to the amateur worker. Some time since we were watching P. O. P. being cut up into sheets and being packed. The operators all wore white cotton gloves, and those who, using odd sizes of paper, buy it in the roll and cut it up for themselves can not do better than to adopt the same plan. There is, of course, no advantage in a white glove over a black one except that the slightest discoloration is noticed at once, and cotton gloves are easily washed.



Solon L. Gates, Chicago Salon.

PORTRAIT.



Milton Franklin, Chicago Salon.

ALDERS.

ANNOUNCEMENT.

FIRST MINNEAPOLIS PHOTOGRAPHIC SALON.

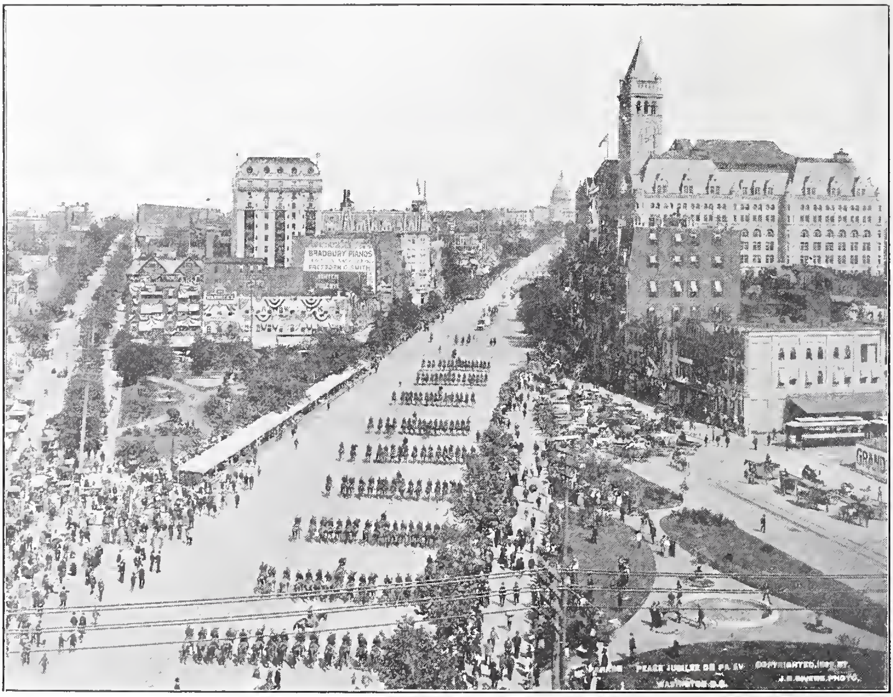
The Minneapolis Society of Fine Arts, in coöperation with the Minneapolis Camera Club, has the honor to announce that the first Minneapolis Photographic Salon will be held in the Art Gallery of the Public Library Building in the city of Minneapolis, Minnesota, from January 17 to January 28, 1903.

Exhibitors at the Chicago Salon, closing about January 4, will be invited to send their work to the Minneapolis Salon, and together with local and other exhibits, a most successful Salon is anticipated.

The Jury of Selection will consist of Mr. Robert Koehler and Mr. Alexis J. Fournier, of the Society of Fine Arts, and Mr. H. E. Murdock, president of the Camera Club.

No charge will be made to exhibitors and no awards are offered, but the acceptance of work by the Jury of Selection will be an honor of no small degree when its personnel is considered.

A pamphlet containing full particulars and rules for exhibitors, together with entry blanks, may be had by addressing Mr. C. F. Potter, Jr., 13 South Seventh street, Minneapolis, Minnesota, of the Committee on Publicity.



Made with same lens as portrait on opposite page.

A UNIVERSAL LENS.

When in New York recently I was much interested to see displayed in the offices of C. P. Goerz, the manufacturer of the Goerz lens, a couple of pictures illustrating the universal character of that instrument. They exemplified so much a point often raised by both professional and amateur workers that I had them reproduced in half-tone and present them to the reader as a positive proof that both softness and critical sharpness can be attained with the same instrument. F. D. T.

Made with same lens as street scene on opposite page.

THE annual exhibition of the Brooklyn Camera Club, 776 Manhattan avenue, Brooklyn, New York, has been set for the 5th, 6th and 7th of February, 1903, and will be open to all amateur photographers. There will be nine classes, with three awards in each class. All prints must be delivered, charges prepaid, at the club rooms not later than January 20. Full particulars on application to the chairman, J. S. Stetson.

I WANT to *thank you* for publishing the Photo-Beacon Tables, which, as you know full well, are *excellent*. I have used them considerably last summer in and around Cohasset, in connection with my Bausch & Lomb Telephoto.

EDITORIAL TABLE.

A VERY pretty booklet, entitled "Hawkeyes," comes to us from the Blair Camera Company, Rochester, New York, devoted to particulars of all the instruments issued by this firm and provides much information in very small compass. It will be sent on request.

"THE A B C OF PHOTO-MICROGRAPHY," by W. H. Walmsley, is the title of a very excellent book for beginners on this fascinating subject from the pen of one of the best workers in this branch of work in this country, and ought to fill a want that must be evident. The book, which is profusely illustrated, is published by Tennant & Ward, New York, at the very reasonable price of $1.25.

FROM the author we have received a copy of "More Light in Negative Making," being the first part of a monograph on this subject, to be issued in five books. The part received is devoted particularly to the theoretical principles of what constitutes a good dry plate. It is got up very sumptuously on fine, heavy paper and bound in very attractive form. It is published by the author, Prof. David J. Cook, Effingham, Illinois.

THE FIRST ANNUAL to reach our desk this year is that very interesting British publication entitled "Photograms of the Year," which is got up along the lines that have been so satisfactory in years gone by, and we feel that every artworker in photography will be only too anxious to be possessed of a copy. Reproductions of the best pictures are to be found practically on every page, while the reading matter is both suggestive and critical. In cloth, the book sells for $1.50; in paper, $1. The American agents are Tennant & Ward, 287 Fourth avenue, New York city.

FROM BAUSCH & LOMB OPTICAL COMPANY, Rochester, New York, comes a very clever advertising booklet entitled "Mahomet and the Mountain," a modern miracle, which is devoted to showing the wonderful power of and simplicity in handling the Bausch & Lomb Telephoto attachment. There are many illustrations in the booklet, showing the pictures possible by the use of this attachment, and altogether it is very readable and can be had on request. It may interest the readers to know that the policy of this firm is to make everything they handle, not only the complete instrument, but all its parts, thus guaranteeing the quality of the work.

THE only photographic annual published in America for 1903 is that issued by the Anthony & Scovill Company, New York, under the title of "The American Annual of Photography," but which is really a consolidation of the annual of this title with the *Photographic Times Almanac*. The book this year is practically along the lines of former publications of this nature and is very fully illustrated by a vast variety of pictures, both as regards subject matter and quality of merit, though it is pleasant to be able to say that the pictorial qualities are very much more in evidence than the "usual thing." The articles are more of a practical nature than in years gone by, and contain many ideas that will prove to be very useful to many photographers. A very interesting feature is the space devoted to good, sensible, practical matter by various writers on nature work, that is to say, photography of birds, their nests and eggs, butterflies, flowers and such. The illustrations for these articles are about the most interesting in the book, and it is simply surprising how excellent are the photographs of such unstable creatures as birds and butterflies. The price of the book is 75 cents.

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Published Monthly.

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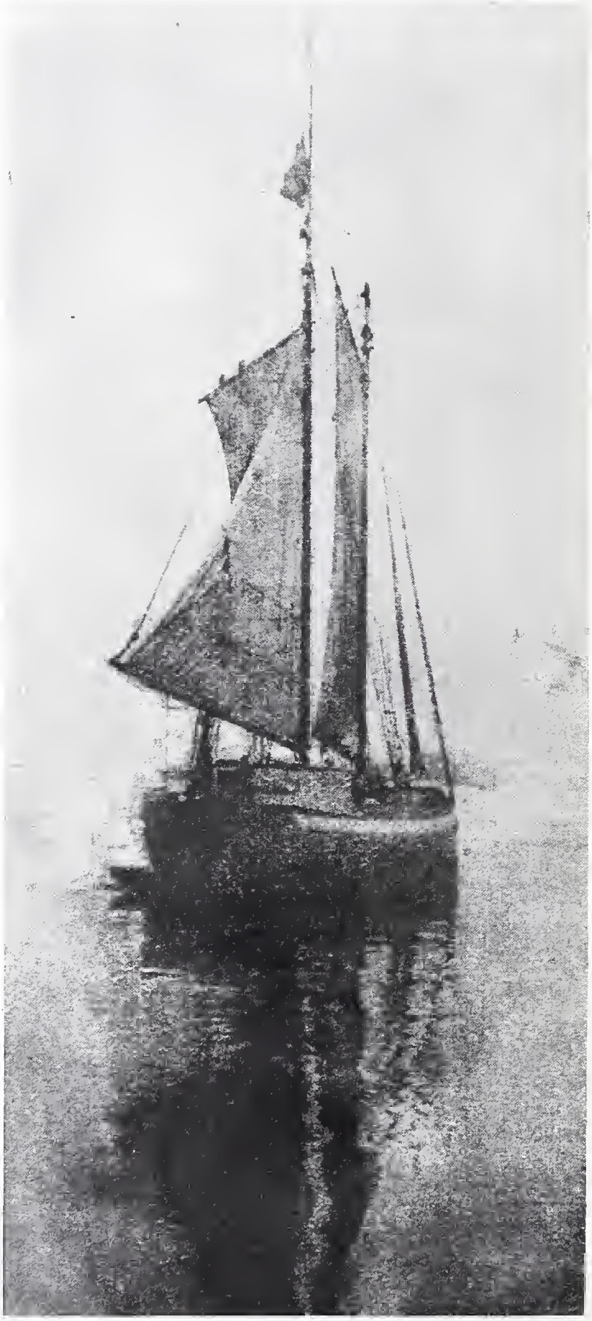

Walter A. Scott, Chicago Salon.

IDLY DRIFTING.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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STEREO WORK.

The visitors to my house seem to naturally expect that I will provide them with a whole lot of interesting pictures to look at, and being anxious that they should feel perfectly satisfied with their visit, I naturally try to supply them with what they want. I found, however, that after a while even the most good natured of them soon tire of looking at the ordinary photograph, so I began to accumulate stereo pictures, to see the effect of such on my visitors, and I find that they would rather look at the most ordinary subject when presented as a stereo than at the finest set of pictures in my collection.

For quite a number of years I have been interested in making this kind of picture and I must frankly admit that the older I get the better I seem to like them. I own no less than three stereo cameras. No. 1 is a 5 by 7 landscape instrument adapted for the work. No. 2 is a hand camera for use with plates, while No. 3, my latest acquisition, is a hand camera for use with films.

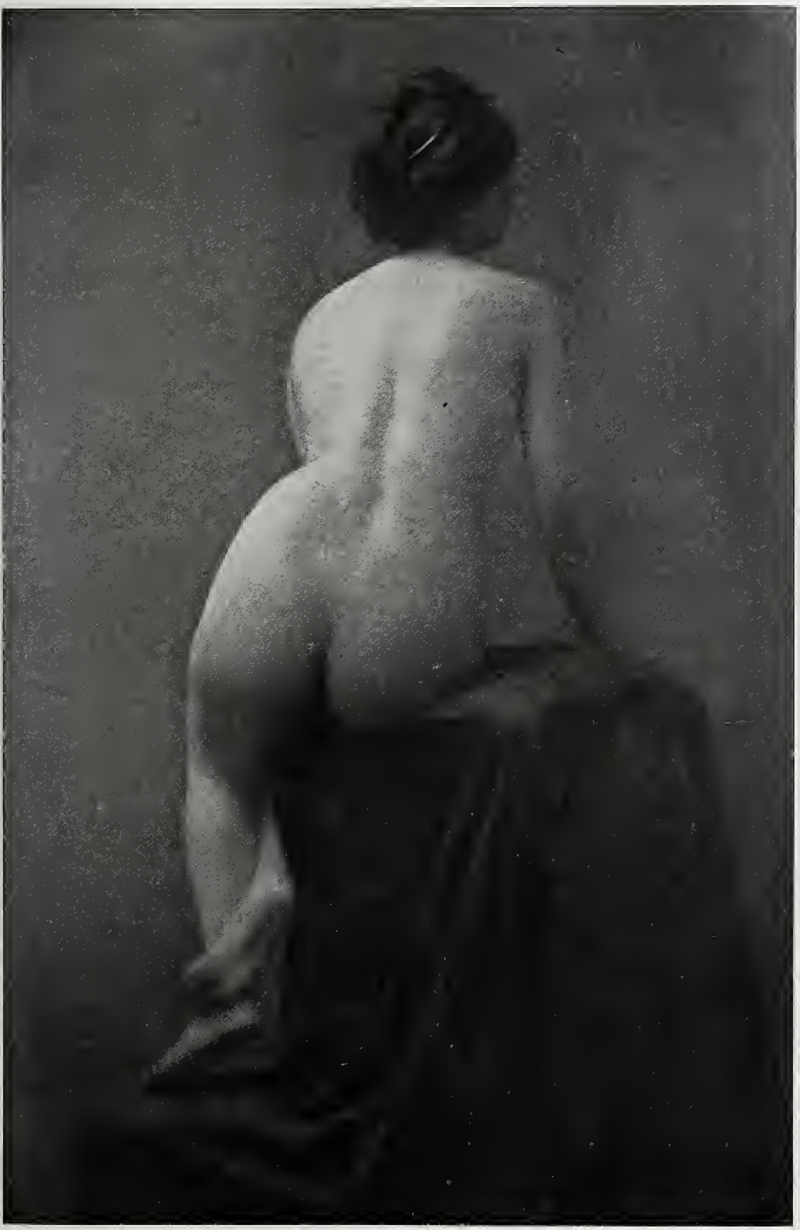
My experience in the work has naturally resulted in an endeavor on my part to solve the reason why stereoscopic photography is less popular to-day than it was in the early days of the art, and the conclusion I have arrived at is this: that the separating and transposing of the prints is too much like work in these days of "canned" goods, that is to say, when we have so much provided for us ready for use. I found in my own experience that when I wanted, say a dozen prints off one negative, I simply detested the finicky manipulation demanded in mounting the prints separately, and so at a very early stage of the game I divided my glass negative into two parts and transposed them onto a 5 by 7 sheet. This procedure, however, was not altogether satisfactory, but in a little while I found that no matter the method of mounting that I devised, one or both of the halves would become detached and I had to begin all over again. On the advent of the "Stereo Weno" into the market I saw an end to all my troubles and accordingly invested in one of these instruments, and during 1902 I have used it with a great deal of satisfaction to myself and pleasure to my friends. As I would like to see many of my readers take up this branch of work, I want to tell them how simple the whole process is and how much real pleasure they will get out of it, and to emphasize the fact that in stereography they would find a source of picturemaking that is denied to them with an ordinary instrument, for subjects that would show very indifferently in an ordinary print are positively beautiful when viewed through a stereoscope.

Let me describe my method of working. In the first place, it is essential that a stereo camera be kept level at the moment of exposure, and therefore, my first act on receiving the camera was, by means of a drop of LePage's glue, to cement a small circular level just behind the view-finder on the instrument, so that I have no difficulty either with hand or stand exposures. My preference, however, even for snapshots, is to employ a tripod so as to be absolutely certain that my camera is truly level. In development I use the kodak developing machine, which gives me very perfect negatives, but since a dark print is the best for stereowork, I shorten the time of development by one-quarter so that my negatives are rather thin. On the other hand, they are full of detail, since I give at least double the exposure that is considered right for an ordinary single picture. Development completed and the roll dried, I cut each pair of negatives from the roll and then proceed to the next stage.

This consists of fastening the film negatives in their proper position on a sheet of 5 x 7 glass. These sheets I secure from spoiled 5 by 7 negatives, usually securing the latter from some of my professional friends. To get rid of the gelatin film, I set them in an ordinary stand fixing bath and pour in sufficient to cover them of a strong solution of washing soda, preferably hot. If I am in a hurry I find I can start to clean them within an hour, but ordinarily I prefer that the negatives soak in this solution for at least twelve hours. On taking the negatives from the bath the film will usually wash clean off, if held under a hot-water tap, but if not, the application of an ordinary nail brush will prove very effective. Just as fast as I clean them I stand them up on a drying rack, where they very soon dry. Before use they ought to be polished by means of a dry, soft cotton cloth, the application of breath to the surface being sufficient to get rid of all stain on the surface of the glass.

In case of negatives made with a Stereo Weno I find that the centers of the negatives are best got when about 1-16 of an inch is trimmed off at each end. For quite a while I used an ordinary 4 by 5 negative as a trimming form. Placing the negative film-side up on an ordinary sheet of glass, I placed the 4 by 5 negative so that its upper edge coincided with the edge of the film, while the side edge was about 1-16 of an inch from the end of the film, and then with one stroke of the knife I cut off the surplus. Repeating this with the other end the negatives were reduced to the proper size. In order, however, to make the work easier, I had a worker in metal make me a sheet of brass exactly 6¼ inches long by 3 inches wide, the ends being perfectly square, and the thickness being about 1-16 inch, just enough to give rigidity. This form I place on the negative so that one of the long edges coincides exactly with the upper edge of the film, and I take care that equal widths are exposed at each end, then by two strokes of the knife I cut off the superfluous matter. The two negatives are now separated by cutting the blank space between them and are ready to attach to the glass plate.

With the help of some kind friend, mounting is a very simple process. To secure approximately good centering I place a sheet of writing-paper underneath the glass and use the margin as a straight-edge. I bring the two cut edges of the film together and adjust them so that the top edges form a straight line with the sharp edge on the white paper underneath, and the moment this is attained the friend applies a strip of lantern-slide binding-paper to the upper edge of the glass, usually covering about ⅛ of the film. This paper adheres at once and is very effective. I then reverse the negative so as to present the other edge. I place on the films the brass form, whose weight holds them in proper position and the other edge is pasted down. The negative may be set aside to dry, but as a matter of fact it is ready for printing at once, for I have frequently done so without any bad results. If the trimming has been carefully done the two edges will butt so close that no line will show in the finished print, but I must confess that I prefer a narrow white line, say 1-16 to ⅛ of an inch wide between each of the prints, and this can



F. G. Monteverde, Chicago Salon.

STUDY IN THE NUDE.

be attained very easily by pasting a narrow strip of the lantern-slide paper along the adjoining edges of the negatives.

Printing may now be conducted in the ordinary way. Glossy paper is usually the best for stereo pictures, as it shows up the detail much better than does mat. Those who prefer to use such papers as Velox will find no cause to change their ordinary procedure, as the most beautiful stereographs I have ever seen were made on the glossy form of this paper, but I have also seen very beautiful pictures on the mat variety of the same paper, this, however, depending entirely upon the subject.

One word about the mounting. A plain tinted paper is essential. Not long ago, not having time and having a very large batch of prints to turn out from a few of my negatives, I handed them over to a trade finisher, who mounted them on a mottled card. In the hand they look very nice, but in the stereoscope they prove very irritating to the eye, for very naturally the multitudinous spots overlapped each other and unconsciously the eyes tried to make the dots coincide like the figures, and of course this was impossible.

The ordinary stereo camera is especially constructed to take pictures in which the foreground objects are anywhere from six feet to twenty feet distant, and this must be kept in mind by all beginners in the work. It is the ideal picturemaking process in which children form a dominant interest, or for flowers growing either in beds or by the wayside. Some of the most beautiful things I have seen were stereo prints of a bank covered with flowers which in an ordinary print would be positively uninteresting. I have made exposures on such subjects as the Falls of Niagara and views down the Gorge, and found, notwithstanding the great distance, that the results were wonderfully fine, and far ahead of anything I ever saw secured with the ordinary camera.

The expense of a stereographic instrument to-day is no more than when working with one of the ordinary type. The Blair Camera Company's Stereo Weno is listed at $25, while the Eastman Kodak Company have placed on the market a simpler type of instrument at $15. The running expenses are the same as for an ordinary instrument. Manipulation, if the negatives are separated as I have described, is no more difficult than with an ordinary camera, while the pleasure to be derived both by the maker and his friends is far ahead of what can be secured by any other phase of photography. Above all is the added advantage that seemingly common-place things around one's own door prove to be the most interesting subjects. If you are wise you will take up stereo photography and you will find a new zest in your photographic life.

F. DUNDAS TODD.

PICTORIAL COMPETITION No. 56.

Flower pictures seem to be becoming more popular every year with the average amateur and the number of prints sent in for this competition were much in advance in number and in quality over that of preceding competitions, but the judges have still to lament the fact that the average worker does not take full advantage of the possibilities in arrangement and in tone quality. The following are the awards:

First prize — Miss Belle Johnson, Monroe City, Missouri.

Second prize — James E. Taggart, Delaware, Ohio.

Third prize — C. H. Gardner, Port Townsend, Washington.

HONORABLE MENTION.

Louis Fleckenstein, J. E. Pollock, Carl Rau, John W. Schuller, R. M. Sears, 2, Chas. Vandervelde.

PARTICULARS OF WINNING PICTURES.

First prize — Made on Seed's Ortho plate, printed on Kloro.

Second prize — No particulars given.

Third prize — Made November 8, at 3 P.M., by the light of two west windows, exposure 20 seconds, stop *f*-16, on a Cramer Crown plate, printed on Platinum.

CRITICISM.

The features of flower pictures that deserve the most attention are twofold. One is the rendering of the blossoms in such a way as will bring out the greatest amount of detail and show the fine quality of the flowers as far as possible in every petal. Second to that comes the arrangement. In the first-prize picture we have a very excellent rendering of chrysanthemums; and in the original print we find a great range of value, from the purest white down to the deepest black. The arrangement is apparently very haphazard, but as a matter of fact, I feel certain that quite a little while was spent in massing them so as to be most effective.

The judges were rather at a loss for a while as to whether seeds could be included among flowers, but they decided that Mr. Taggart's print ought to get the benefit of the doubt and so it was awarded the second prize. The coloring being blue it will be rather difficult to reproduce the print and show the beautiful gradation from the white of the milkweed seed wings to the intense black under the pods, but all the gradation is in the print.

The third-prize picture aims at decorative arrangement with considerable success. The picture is worked out in a scheme of only three tones in which pure white is so scarce as to be very precious. The lighting has been carefully handled so as to subdue the stem of the flower, making it thereby very subordinate to the main feature of the blossom. F. Dundas Todd.

FUTURE COMPETITIONS.

Competition No. 58 — Lantern slides, any subject. Closes February 28.

Competition No. 59 — Snow pictures. Closes March 31.

Competition No. 60 — Waterscapes. Closes April 30.

Competition No. 61 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender, but must not have even such words as "Photographs." *All packages violating this rule will be declined.* Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

S. L. Willard, Chicago Salon.
A HEAD.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.
Second—Books to the value of $2.50.
Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

BRIEF CRITICISM OF THE PICTURES IN CHICAGO SALON.

SECOND PART.

H. Knutzen's "Amid Sunshine and Shadow" is a very dainty piece of light and shade effect exhibiting good composition, but the tone qualities have been brought to so fine a point that the effect of strong sunshine and shadow is almost entirely lost.

F. K. Lawrence has some very good work in his four prints; his snow scenes being particularly good, showing good gradation and quality.

H. B. Lefroy has a new rendering of a popular subject, namely, "The Smoky City," which he merely indicates on the horizon, using it as a point in the composition that is very good, being sketchy in character, yet effective.

C. H. McDowell has two prints, both of which are characterized by handling in a low key that is good. The composition in his figure study is very simple, suggestive and effective, but his landscape is, if anything, rather symmetrical.

F. E. Marks handles the very ordinary subject of "Evening Meadows" in a way that makes them positively beautiful; the spacing and light being very simple.

Oscar Maurer. As was to be expected, Mr. Maurer's work exhibits the characteristic for which he is especially noted, namely, the power of combining breadth with fine light and shade. I like all of his work with the exception of his portrait, which is rather posey.

F. E. Monteverde is the only exhibitor who has the temerity to photograph a nude figure according to the orthodox, crisp definition, ideal of photography, all others endeavoring to get away from the suggestiveness of the subject by either putting it out of focus or rendering in a very low tone, but Mr. Monteverde knows two things and these he knows well, one is beauty of line and the other is fine tone gradation, and armed with these he has no hesitation in tackling the most difficult subject in photography on the most strictly photographic lines and securing a success. His other work is just as full of fine quality as is this.

Thos. A. Morgan exhibits only one print, "Out of the Mists," but it is undoubtedly one of the best bits of gradation in the Salon.

Caroline Ogden has one print that shows better close at hand than it does at a distance. The spacing is, if anything, a little angular and naturally so are the lines, yet withal, when viewed close, it is very satisfactory.

E. F. Oyster has a dash of the poster effect in the "Lady and the Mirror." The material is the very simplest, only the figure and a small mirror, but he has handled it with skill and the result is good.

H. B. Parker, in his "Pines of Annisquam," depends upon strictly photographic methods even to the use of glossy paper, giving a very successful rendering of pine trees.

F. Max Patitz. "At Break of Day" is a rather unique rendering of a hackneyed subject — sand-dunes, in which the dune is made to play a part of minor importance as foreground to a very effective cloud effect.

J. R. Peterson's "At the Saw-bench" is a very successful interior subject, exhibiting good silhouetting and lighting.

C. A. Pettersen has got one print which is a dainty, sweet, gray effect, entitled "When the Mists of Evening Fall."

W. B. Post has only three frames, but each is beautiful. The subjects are either water or snow scenes and he uniformly adheres to a dainty gray effect which is enhanced by frames of the same color, and the result is both happy and successful.

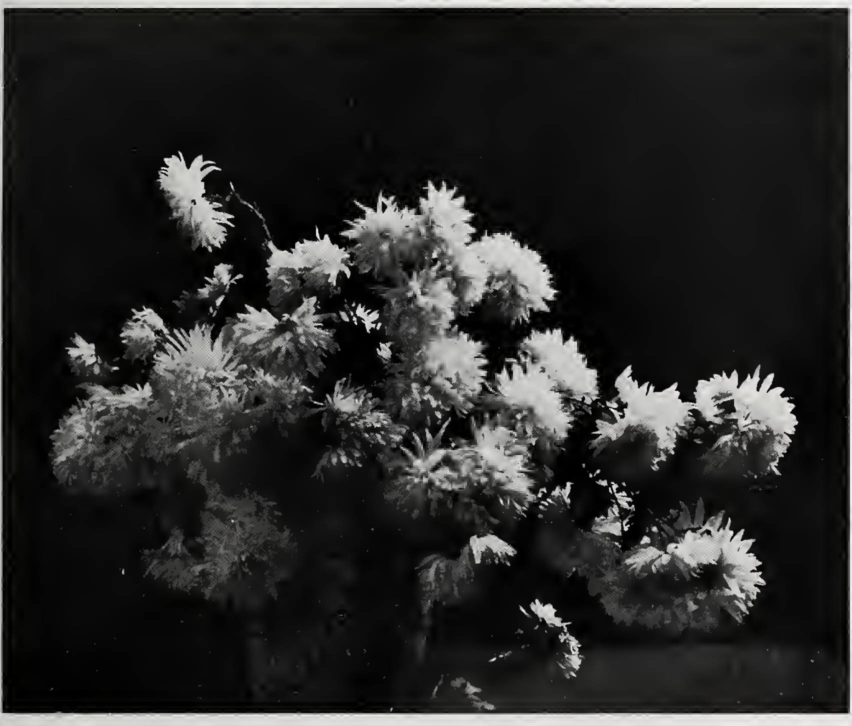
Geo. T. Power exhibits two portraits, one of which, "A Gentleman at His Desk," is a capital bit of composition and lighting.

Virginia M. Prall has three pretty subjects, two of which are really studies showing effort, and that successful, to emphasize beautiful line and to deal in masses of about three tones.

J. M. W. Pratt. "Young Holland" is a rather promising bit of work that attracts attention, not so much for what is in it as for the indication it gives that Mr. Pratt has in him something that sooner or later, probably sooner, will bring forth some good pictorial work.

plate. His handling, however, is very broad and vigorous. "Marsh Willows" is less effective in treatment.

Virginia G. Sharp has three portrait studies showing three methods of grouping two children, and in all cases very satisfactorily, as far as arrangement is concerned. "Sunshine" is rather a unique method of lighting in portraiture and would have been simply ideal had not the legs of the two children been incased in black stockings which form a bad note.



Miss Belle Johnson, Monroe City, Mo.

FIRST PRIZE.

Carl Rau. "Evening Shadows." This is a rather harshly lit subject, but has many good points.

Geo. H. Sheer's "Fleur-de-lis" is a bit of rather fine tonework in gradation. The same idea is attempted in "Willows," but with hardly as good success.

Walter A. Scott's "Idly Drifting" may be considered as the most sketchy bit of work in the whole exposition and it certainly is good.

Carl E. Semon has clearly a good eye for the picturesque, as is evident in his landscape study, but a different point of view would have been better, as he secured really two good pictures on one plate. His handling, however, is very broad and vigorous. "Marsh Willows" is less effective in treatment.

Herbert F. Smith has a strictly photographic but bold and vigorous rendering of "Marsh and Meadow," and the same remark may be applied to Frank Snyder's "Crossing the Stream."

J. M. Tallman has the only dog subject in the Salon. His subject is looking rather meek, but the arrangement of lines is good and the lighting well handled.

Henry Troth has two pictures that are dainty almost to flatness.

Amelia Van Buren has four pictures, the best of which is "Reading Omar Khayyam," which is good as a bit of decorative arrangement and in lighting. Similar remarks apply to her other subjects, but her waterscape is rather flat and insipid.

Robt. E. Weeks has no less than eight frames on the wall, all of which are really good, and better still, different from each other. Mr. Weeks has evidently attempted to follow no style but simply tried to express himself. When a subject interested him he took it and then labored with the negative to get out of it what he wanted. There is something elusive in most of his work, we feel there is something there, but when you try to put your finger on it it is gone and you have to supply the idea yourself.

Carl Werntz and S. L. Willard have two very good portraits of Indians in which the treatment is in harmony with the subject.

C. T. Wernwag exhibits a nun picture. Long ago I swore off criticizing such subjects, as hundreds have come under my notice and I have got so tired of them that I have no patience to look at them.

Wm. L. Whitson. "Lengthening Shadows" is the title of a calm evening effect that is very restful.

Myra Albert Wiggins, as usual, is simple in all her work, but somehow it looks as if she had been standing still for quite a while.

Arthur W. Wilde exhibits two landscape subjects and three interior figure subjects. His "Daisy Field" at a distance shows beautifully, and yet, withal, it is a very simple piece of work. The conception of distance from foreground to horizon has been worked out very successfully. His other work is good.

S. L. Willard is just as varied and as fancy free as Mr. Weeks, but he has got a very decided way of doing things. In making an exposure one can see that he is either working for some beautiful combination of lines or some new combination of masses, and the subject matter is almost invariably subordinate to the predominant idea in his mind, but it is effective and one delights in following him through his series of photographic gymnastics and can only wish that there was more of it.

Osborne L. Yellot has five prints, principally seascapes, all printed in deep blue, almost to the suppression of detail. "Sunrise on the Ocean" is perhaps the best of these. His other work is quite simple, yet bold and very pleasing.

L. M. Kaiser. One of the most unique pictures in style and handling in the Salon is entitled "On the Slope of Tamalpais," by this gentleman. The print would readily be mistaken for a very old engraving by some old etcher, and he has carried out the idea in the arrangement of his material and the rendering of the various planes in the landscape. Altogether it is a very interesting composition.

F. DUNDAS TODD.

SILVERING MIRRORS.

The following method of silvering, given by M. Izarn, has been tried by one of THE PHOTO-BEACON readers, who says it is the best he ever tried. The process is a modification of that of M. Lumiere, but as the account of it was very brief, M. Izarn had to ascertain the best conditions by experiment. The surface to be silvered should be scrupulously clean. Prepare it by rubbing it well with a wad of cotton wool, first using acid and then ammonia. Polish with a little finest rouge, and finally rinse well under the tap. The dish in which the mirror is silvered should also be perfectly clean. A one per cent solution of silver nitrate in distilled water should be prepared and converted with pure ammonia in the usual way. Take the quantity of solution required for the mirror and place it in a measure. In another measure take a certain quantity of formalin, counting the number of drops from a dropping-flask. The determination of the quantity will be afterward described. Pour the silver solution into the measure containing the formalin, then back again into the original measure, and finally into the silvering dish. This should be done very quickly, so that the change which takes place in the color of the solution may not begin until the dish is filled. Rock the dish well until the silvering is finished. The process takes scarcely more than a minute. The quantity of commercial formalin (forty per cent) to be used, should be ascertained in the following manner. Take a white porcelain dish, clean it well, pour a little ammonia into it and finally rinse it thoroughly under the tap. Pour into the dish 15 c.c. of the ammonio-nitrate of silver solution and add successively seven drops of formalin, rocking the dish well meanwhile. The solution rapidly assumes a rose-violet tint, which deepens in color. This is quickly followed by an irregular deposit upon the surface of the dish. The deposit passes through various shades of color, from rose to violet, blue and iron-gray, and finally forms a film of bright silver, of yellowish tinge. The solution, meanwhile, clears and becomes coated with patches of fine metallic luster, giving it an oil appearance. The dropping-flask determines, to some extent, the number of drops of formalin. That used by M. Izarn gave a reading of five grams for one hundred drops. The silvering is complete when the solution clears and becomes charged with a flocculent precipitate. Insufficiency of formalin is indicated by muddiness of the solution, while an excess will work too quickly

F. K. Lawrence, Chicago.

THE BIRCH WOODS.

and fail to give a deposit, or one too tender to be of use. When the solution is correctly adjusted, the film, after well rinsing under the tap, will withstand hard rubbing. M. Izarn prepared glass plates in this way for daguerreotype. After the mirror has been well washed under the tap and finally rinsed with distilled water, it way be polished with soft washleather and finest rouge, as soon as it is dry. As the film becomes very hard, if it is intended to be used as a resist for engraving with hydrofluoric acid, the work should be done as soon as the film is dry.

A JUROR'S OPINION OF THE THIRD CHICAGO SALON.

The Third Chicago Photographic Salon, held under the joint management of the Chicago Society of Amateur Photographers and the Art Institute of Chicago, opened last evening with a reception and private view to its friends and patrons in room 30 at the Art Institute.

The Salon this year is unique from a number of points of view, and the work hung, in the majority of cases, shows a marked increase in artistic and technical merit over the Salon of last year.

For the first time in the history of the Chicago society — and I am not sure but that it is the first time in the history of the Photographic Salon movement in America — the jury of selection was composed entirely of painters. Other photographic societies had had painters on their Photographic Salon juries — many times with unsatisfactory results, but this jury was composed entirely of painters and their instructions were to judge the pictures submitted according to the canons of the fine arts — technical excellence was to be considered, but it was to be a secondary consideration. All of the pictures sent were passed on by this committee of five, which was composed of Mr. Oliver Dennett Grover and Mr. Ralph Clarkson, nominated by the Art Institute; Mr. Walter Marshall Clute and Mr. Edgar Cameron, nominated by the Arts Club of Chicago, and Mr. Fred Richardson, who was nominated by the Chicago Society of Amateur Photographers. It is a cause for regret that many of the leading photographic amateurs should have thought best not to send work to be judged by this committee, for they are missed, but their places have been taken by new workers whose pictures show promise; in fact much of it comes to us with great strength and pleasing originality.

Over 1,400 photographs were submitted, and of these 191 pictures by 79 exhibitors from 16 States and Canada were selected to be hung. Maine is represented by 2 workers, Massachusetts by 3, New York by 7, Pennsylvania by 9, Rhode Island by 1, New Jersey, Ohio and Michigan by 2, Illinois by 26, Maryland by 3, District of Columbia by 2, Wisconsin by 5, Kentucky, Colorado and Oregon by 1, California by 6, and Canada by 3.

Of these 191 prints 64 are by Chicago photographers, and of these 52 were submitted by 18 members of the Chicago Society of Amateur Photographers.

This is a normal increase over the statistics given us by last year's Salon, when about one thousand prints were submitted by 58 exhibitors and 129 hung. Thirty-eight of these were Chicago prints and 28 were made by 13 members of the Chicago Photographic Society.

There are 7 new club members represented this year and 11 of those represented last year again show with better conceived and executed pictures than in the former Salon.

But the fact which surprises us most is the large number of new exhibitors, mainly from the East. This is undoubtedly because there is no Philadelphia Salon this year and so the 53 new exhibitors come to us instead and help in no small measure to raise the standard of our Salon.

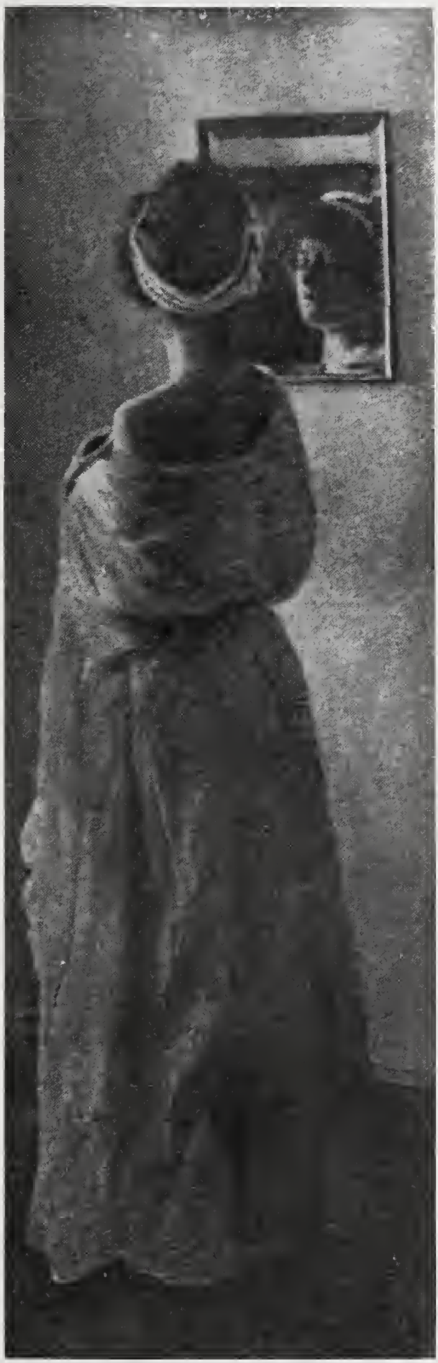
It would be difficult to give all of the new workers the credit due them, for their work is new and in many cases immature and the final judgment can wait, but among these new exhibitors is Solon Gates, of Chicago, who sends three well-considered portraits — that of Hardesty G. Maratta is especially well done; Mrs. Jeanne E. Bennett, of Baltimore, sends two, a "Dutch Kitchen" and "Helen," and Alice Boughton, of New York, is represented by eight prints showing great versatility in the handling of her subjects, for she has portraits, landscapes and nudes managed with great art. The "Wood Sprite" is a somewhat misty, but nevertheless artistic, creation.

Among the older exhibitors are C. Yarnell Abbott, who shows five prints, "The Darker Drink" and "When the World Was Young" which have all the feeling of their subjects so widely separated in sentiment; Alvin Langdon Coburn sends three portraits of well-known artists and a view of "Ely Cathedral"; S. Stockton Hornor has among his prints a capital "Frosty Morning"; Oscar Maurer sends among his five prints the well-known "Cock Fight" and "A Dutch Creek"— the latter being known through the various reproductions we have seen of it in various photographic journals; F. E. Monteverde shows us "A Study in the Nude" and "Fruit"—fine line and tonal studies — and the last of the non-resident men we can mention is W. B. Post, who has one of the finest of landscapes in his picture of the "Water Lilies."

Among the prints shown by members of the Chicago Society of Amateur Photographers and worthy of special mention are the following: F. Detlefsen's "The Ice-bound River," H. Knutsen's "Amid Sunshine and Shadow," Louis A. Lamb's "Silhouette and Shadow," E. F. Oyster's "The Lady and the Mirror," and William B. Dyer, in his eight prints, shows us his art at its very best.

WALTER MARSHALL CLUTE,
Member Jury of Selection.

SEE the special offer, in connection with *The Home Bazaar,* made in the advertising pages. Those who have used the scissors think they are simply wonderful.



E. F. Oyster, Chicago Salon.

THE LADY AND THE MIRROR.

THE DEVELOPER AND ITS CONSTITUENTS.*

BY A. K. BOURSAULT.

CHAPTER IX.

COMPOUNDING FORMULÆ.

Nothing remains now but to apply in a practical way, for the benefit of the beginner, the principles which have been laid down in previous chapters. We shall choose three or four typical formulæ and make them up as examples according to the foregoing directions. Let it be first a pyro developer. The formula runs thus:

No. 1.

Distilled or pure well water	16 ounces
Sodium sulphite	4 ounces
Pyrogallic acid	1 ounce
Sulphuric acid	5 drops

No. 2.

Water	16 ounces
Sodium carbonate	4 ounces

To develop, take —

No. 1	1 ounce
No. 2	1 ounce
Water	8 ounces

We notice at first that no indication is given as to the kinds of sodium sulphite and sodium carbonate used. We assume, therefore, that crystals are intended. Starting with Solution A, we get a 16-ounce graduate which we fill up to 14 ounces with hot water. Then we weigh out carefully 4 ounces of sodium sulphite crystals. We assume again that apothecaries' weights (480 grains to the ounce) are intended, as no information is forthcoming on that point, and as generally formulæ are given that way. We must be careful to weigh out our sulphite on a clean sheet of paper and never on the pan of the scale itself, except it be of glass and be washed and dried between each weighing. We avoid that way any possible contamination of our chemicals. This done, we drop the sulphite in our hot water, stirring all the time with a glass rod, or we may put it in a clean muslin bag and dip the whole in the water, suspended from our glass rod, which is placed across the top of the graduate. This latter mode of proceeding insures quick solution and prevents any foreign matter soiling our solution. Remember the water must be hot. When our salt is completely dissolved, we allow the mixture to cool down, and possibly hasten this by putting the recipient in a basin of cold water. When cool, with a pipette or a glass rod, or carefully from the neck of the bottle with the glass stopper but partially drawn, we pour five drops of sulphuric acid into it, stirring with our glass rod.

Whether we shall filter our solution is a mooted question. Some will say yes, some will say no. As a matter of fact, the less developing solutions are in contact with the air the better. If we use care and pure chemicals, we might with advantage dispense with filtering. We then proceed to add our ounce of pyrogallic acid, which will instantly dissolve. We will perceive then that the bulk of our original solution has considerably increased in volume through the successive additions of chemicals and comes very nearly to the 16-ounce mark. If not on a level with it, we add as much cold water as necessary to bring it to that point, and after allowing the solution to settle for a few moments, having carefully covered the top of the graduate, we decant the whole in a clean 16-ounce bottle provided with a good rubber cork or a good-fitting glass stopper previously rubbed with paraffin. Having thoroughly cleaned our apparatus, we proceed to make up the second solution in the same manner.

Should we not have sal soda or sulphite in crystals at hand, we could still make up the same formula. Reverting to the table previously published (see PHOTO-BEACON of April, 1902), on the corresponding value of alkali, we would find that 2 ounces of sodium sulphite anhydrous and 1.49 ounces of dry sodium carbonate would answer the same purpose as the respective 4 ounces given in our formula. Accordingly we would use these figures in place of those given with the formula and get the same results. Or finally we could make use of the hydrometer as explained in the PHOTO-BEACON for December.

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* Copyright, 1902, by F. Dundas Todd.

Both solutions being now ready and at the right temperature, 65° to 70° Fahr., we mix up our developer, pouring into a clean graduate first the No. 1 solution then the No. 2, then the necessary amount of water if any is required, as in the present case. Everybody ought to make himself a rule to proceed this way and to pour always the No. 2 or B or alkaline solution into the No. 1 or A or reducing solution (ferrous oxalate excepted).

Our next example will be taken from a metol quinol developer. A little knack is sometimes useful with metol, although the same proceedings as previously described might be used with it. The formula is given thus:

No. 1.

Water	16 ounces
Metol	30 grains
Hydroquinone	30 grains
Sodium sulphite, dry	120 grains

No. 2.

Water	10 ounces
Sodium carbonate, dry	20 grains

To develop, take—

No. 1	1 ounce
No. 2	1 ounce
Water	2 ounces

Having all our apparatus ready, we begin by pouring into a small graduate say 6 ounces of warm water, in which we dissolve first our metol. Then in our 16-ounce graduate we pour 6 ounces of hot water; to this we add our sodium sulphite, and when that salt has dissolved without allowing any time for cooling we throw our hydroquinone into the mixture. This will also soon dissolve. We have then only to pour our metol solution into the larger graduate and make up with water as required to have our developer ready.

Jas. E. Taggart, Delaware, Ohio.

SECOND PRIZE.

Another developer which requires some particular care is a mixture of eikonogen and hydroquinone. Many photographers have often complained of its lack of keeping qualities. This is entirely due to the improper way of making it up. Following formula from Dr. Miethe is one of the finest that can be used for portraiture, and if made up as given below, will keep a long time in good condition and will be found desirable for every kind of work:

SOLUTION A.

	Parts.	Grains.
Sodium sulphite, crystals,	100 =	1543
Eikonogen	10 =	154
Quinol	10 =	154
Water up to	1500 =	52½ oz.

SOLUTION B.

	Parts.	Grains.
Soda Carbonate, crystals.	75 =	1158
Water up to	500 =	17½ oz.

Two to three A plus one B plus bromide as required.

We procure a recipient that will hold, say 32 ounces, which we measure into it. We bring our water to a boil and while boiling hot add to it the sulphite of soda, which will dissolve nearly instantly; then always while the water is boiling hot we add in quick succession the eikonogen and the hydroquinone. As soon as the latter is dissolved, we pour the solution off, make up to total volume and let it cool in a closed vessel. When cold it is decanted into small 8-ounce bottles if very long preservation is required; if not, in any handy well-corked bottle of any size.

Eikonogen, alone, requires the same care, and if dissolved in boiling water and cooled down in a closed recipient, will keep for a long time its developing qualities unimpaired.

All other developers are similarly treated, but do not require the use of hot water; in fact it is better to use cool water for them, or to wait until the sulphite solution has cooled down.

When metabisulphite of potash is used instead of soda sulphite, hot water must not be resorted to, cool water being used instead. The solution is affected rapidly, metabisulphite being very soluble, even in cold water.

The alkaline solution is always made up in the same way. It must be noted, however, that the potassium carbonate had better be dissolved in cool water and that the potassium and sodium hydroxides, caustic soda and caustic potash, *must* be dissolved in cold water.

I trust preceding chapters will have helped the reader to understand certain particulars about development and developer which may have escaped them, and put them in position to find out the reason of some unsuccess and irregularities in the working of their solutions which might have been unaccountable to them before. If they have, the writer will feel amply rewarded for the trouble of writing these lines.

A PHOTOGRAPHIC CLUB LEAGUE.

At the rooms of the Brooklyn Camera Club, 776 Manhattan avenue, on Monday evening, delegates from the more prominent of the local associations met in convention and formed a League of Long Island Photographic Clubs. The delegates present represented, besides the Brooklyn Camera Club, the Queens County Camera Club, the Brooklyn Academy of Photography, the Brooklyn Institute and Realistic Camera Clubs. Letters signifying their intention to send delegates were received from the Bushwick Camera Club, Union Camera Club, Y. M. C. A. Central Camera Club, but owing to inclemency of the weather were not represented.

As stated in the call issued by the Brooklyn Camera Club, and agreed to by all the delegates present, the principal objects of the league are a federation for mutual intercourse and comparison of work, exchange of lantern slides and photographic prints for exhibition purposes and the holding of an annual photographic salon. The various phases of the proposition were discussed at some length and a permanent organization effected by the election of Mr. Edwin O. Torbohm as president and Mr. John J. Tresider as secretary, both of the Brooklyn Camera Club, it being the feeling of the delegates that for the present at least these officers should come from the same club so as to be in close touch with the details of organization.

A committee on plan and scope and a committee on lantern slide exchanges were appointed, the convention finally adjourning to meet on December 17, 1902, in the rooms of the Brooklyn Academy of Photography, 177 Montague street, at 8:30 P.M. Before leaving the quarters of the Brooklyn Camera Club, however, the delegates found time to partake of a light luncheon, and a pleasant hour's chat about the things photographers most like to discuss was enjoyed by all.

The idea of forming the league was very well received and the enthusiasm of the organizing delegates augurs well for a lively time among the local photographers in the not distant future. It is the dream of the originators to perfect a strong organization which shall be an incentive to clubs in various sections of the country to similarly organize, the various local leagues thus formed to be united later into State and national federations.

ADVERTISING AND PICTORIAL PHOTOGRAPHY THE KEY TO SUCCESS.*

The question that confronts the photographer of to-day is this: "How shall I hold my trade and how shall I secure more business?"

The answer is summed up in the one word, *Advertising*. Advertising is divided into parts, direct or indirect. By the former, we of course refer to printers' ink; and by indirect advertising we mean the actual goods.

H. Knutzen, Chicago Salon.

AMID SUNSHINE AND SHADOW.

A good authority says, "It takes between $500,000,000 to $600,000,000 in advertising each year, to move the world's business." Quite a snug little sum to go into the printer's pocketbook. But merchants and manufacturers believe in it, practice it, and prosper by it; else they wouldn't make these large appropriations year after year.

Of course this great sum includes bad as well as good advertising. And of the former there is not a little. For, like any other line, advertising has charlatans as well as honest ones within its ranks. But the fact that ninety-nine out of one hundred successful merchants *do* advertise, is conclusive proof that there *is* power in printers' ink; if written right — spread right — and issued right.

The successful merchant who understands advertising pays no more for his newspaper space and business literature than the unsuccessful merchant, who is a novice at advertising and constantly shocks the community with wholesale statements and fabrications over questionable goods. The latter, in sheer ignorance and greed, helps to swell the bank account of the newspaper man, at the expense of depleting his own purse. No wonder he cries that, "Advertising does not pay!" No wonder an outraged public claim that advertising is a swindle, flavors of blackmail and is beneath the dignity of all honest concerns. It is a lamentable fact that there are many *schemes* and much *poor* advertising; but that does not rob all advertising of dignity.

Let us look along the line for a moment and see whether dignity and truth, or falsehood and foolishness characterized the *first* advertisement. Let us read, for it is on record in the greatest piece of literature the world ever knew, if *He,* who planned the first publicity, was not worthy to establish the custom.

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* A paper read at the Boston Convention.

You remember it happened this wise. There was a small audience years ago. In fact, a single family, cruising in a huge house-boat made of gopher-wood, that read the first advertisement mentioned in history. There before their wondering eyes was displayed the grandest poster ever issued. It outshone, outrivaled and belittled all subsequent efforts of man. Its color scheme was in overlapping bands of resplendent tints — a semi-circle of radiant beauty against the blue of heaven. And it read in unmistakable language, *" There will never be another flood."*

Thus the Almighty, himself, was the first to proclaim intentions to the world; literally engraving upon the skies a promise, an advertisement unto the world.

This, my friends, is the first chapter to the history of advertising. The other chapters you are of course familiar with. How as man's dawning taste required more than enough for existence, he exchanged the articles which he liked with those which his neighbor liked to make. And thus through trade and barter, down through the centuries, until the printing-press gave birth to wider publicity, to the present time where advertising is the lever that lifts the business wheels along. It is the warp upon which the woof of trade is woven, from the soliciting of an order to the delivery of the goods.

And now we stand at your studio door — how are you going to advertise? How will you use printers' ink?

First we will discuss the mediums not to use.

Avoid using free, cheap mediums, because they give the impression of cheap goods and poor service. The common circular or dodger is the chief sinner on the free list. It is usually distributed by some urchin with a cigarette cocked in the corner of his mouth, who puts part of them in the gutter. The remainder are crumpled back of the door knob, or scattered about the steps. Their " finish " is usually the fire, and without being read.

Next comes the theater program, a much overestimated medium. The astute agent approaches you and in confidence offers a prominent space for a " reduced "(?) price. He tells you your ad. will be in the hands of hundreds of cultured people every evening. Now follow down the aisle after the usher has issued the programs and watch " cultured " people handle the sheet sparkling with advertisements. About the first move they do make they fold over a strip from the side. Next they turn back a slice from the opposite side, then a little bit off the top. Now what have they left? Simply the synopsis and the cast. The agent told the truth when he said " that the ads. would be out of sight." People go to the theater to be entertained, not to study business announcements.

Street-car signs are good to announce the merits of soaps, cigars, shoes, etc., but are poor places to mention the merits of portraits. Novelties, such as rulers, match-boxes, fans, etc., should be left to the hardware man and his kind. Clocks, hotel registers, sandwich men and barkers are other poor mediums, and are not to be considered for the dignified profession of photography.

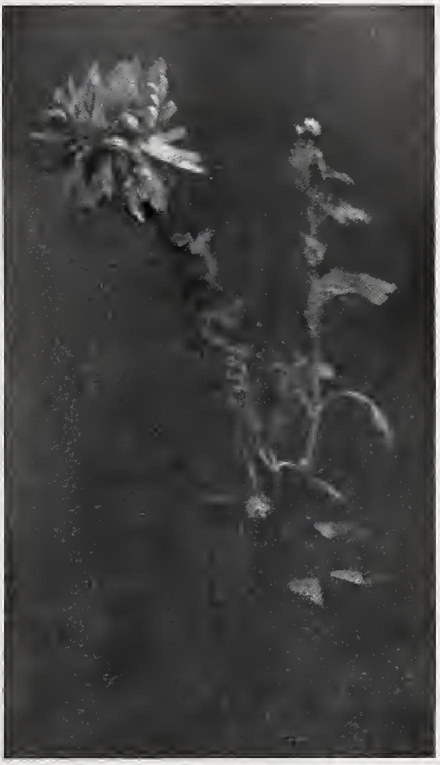
Now, you wonder what mediums are left to use. Well, every photographer should have an ad. in the newspaper. Either a short reading notice or a modest display ad. The antiquated practice of a simple announcement card will not do. Advertising is news and to draw trade must be changed often.

Booklets come next and can not be overestimated. Illustrated booklets are the best. You know yourself what estimation you put upon booklets that are illustrated. Those that come to your desk embellished with pleasing pictures are more thoroughly read, perhaps taken home to your family. Many merchants issue bushels of booklets and expect returns within a few weeks, which is not possible without following them up with proper and courteous letters. Issue a few at a time. But when you have them printed, order in quantities that will insure you a moderate price, from one thousand to five thousand, according to the size of your town. Issue, we will say, two hundred and fifty in a small town. With each booklet in a separate cover enclose a courteous little announcement. Send the booklet in a neat white envelope, carefully sealed and with full postage, and then when the same arrives at its destination, it comes in with the regular mail and invitations and is received in the same spirit of dignity as you intended it to be. Another point — be sure and put the stamp on square. If no returns come from the booklet within two or three weeks, send another letter, calling attention to the booklet already sent, and if necessary in a few days more follow up with another booklet. When you direct a booklet give the actual name of the lady, Mrs. So and So, full address, and not to the "lady of the house," for then it lacks a species of dignity that all women appreciate. This furnishes sufficient printers' ink or direct advertising for the photographer.

Now, for the indirect and most potent medium, which, gentlemen, is your pictures; they will make you or unmake you, despite the most alluring advertisement or the most beautiful booklet ever built.

We refer to the present as an age of specialists. So it is. There are specialists in every line of photography. We have the artist that makes the pictures of men only — we have the artist that makes the pictures of women only — and we have the artist that makes none but children's pictures; and others whose forte is the portraits of pets. That is all right as far as it goes, and is the natural trend of all trade.

The next step, and what is most needed in the photographic business, is individuality. There are too many pictures alike; first cousins, you might call them, to each other. You may take thousands of pictures throughout the country, all road pictures, that come up to the accepted standard of excellence. Erase the names, shuffle them and you could not tell the difference between one man's work and another's, only as you knew he had made such and such a picture; in other words, there is a plethora of photographs and a dearth of pictures; which is due from lack of art training. Photography is one thing, picturemaking by photography is quite another thing. Raw nature is no more Art than raw mahogany is Chippendale. Photographers have all worked for years for what they call tonal qualities in their pictures. They have solved the problem which is evidenced by the great number of pleasing pictures seen throughout the country; pictures that the great mass of people want to buy because they pleased the eye. By tonal



C. H. Gardner, Port Townsend, Wash.

THIRD PRIZE.

quality we mean the picture that has the full range of complete gamut of light to dark, with all those beautiful intermediate half-tones. Go one step farther. Incorporate values, which means correct representation of distances; in other words, atmospheric perspective. This is the first step toward pictorialness.

An object that is four feet from the eye grows dimmer in outlines and in color when seen fourteen feet from the eye; still dimmer at forty feet. When we use the term color we do not refer to its red, green or yellow tint, but to its strength of light and shade. Pictorialness is the quality which attracts the stranger. It is that quality which makes the foreground stand out and the background recede. It gives the sense of atmosphere between the subject and the background in such a manner as to dispel the surface of the picture.

In other words, the picture lives.

Pictorialness also includes good composition. Composition is usually understood by the photographer as an arrangement of pleasing lines, lights and shades. Quite to the contrary it is a pleasing arrangement of lines, lights and shades. The photographer who can produce a portrait that impresses one with more than a likeness, that shows the actual character of the person; in short, a picture that a stranger is attracted toward, can command most any reasonable price for his work. In every community there are people of culture and refinement who will pay without question a good price for such pictures; again, that class of people who do not depend upon their own judgment for things in Art, will have such pictures made of themselves simply out of imitation. This pictorial photography will pay; in other words, it will pay to study pictorial photography.

Is photography a fine art? Yes, if a fine artist controls the lens, if a fine artist develops the plates, if a fine artist prepares that plate, if an artist prints that plate. Then photography is a fine art. Photography by itself is simply a trade, a craft taking years of hard earnest study to master. Picturemaking is only the application of that trade. It is a good thing to assemble in convention to exchange ideas on technic and manipulation; but constant copying of ideas belittles one's imagination, dwarfs one's resources and keeps back one's individuality. Certainly we must creep before we can walk. We must imitate before we can originate. But constant copying keeps us farther away from that goal of true picturemaking, pictorial photography, which makes life worth the living and secures for us a higher plane of pleasure, and the key to higher prices.

Walk with me down one of the side streets where cheap gravestones and architectural images are turned out by the dozen. There stands a greasy little fellow pecking away at a piece of porphyry. He is making a cherubim. What! that ugly little image an angel? One look at it is enough. March with me over to your magnificent Art Museum. There, in an alcove, is a plaster replica of the head of Zeus; one of the greatest, if not the greatest pieces of statuary ever made. One look is not enough. Neither was it enough for the ancient Greeks, for history states that this statue had the power of dispelling grief and sorrow. That those who beheld that statue lost all heart-sickness and took on a new lease of life, departing from its presence with sunshine in their hearts and hope for the morrow.

The little effigy by the stonecutter is a mechanical piece. The head of Jupiter is a masterpiece. Because one was by Phidias, the other is perfidious.

Again, many photographers seem charmed with a negative's power to produce a great many prints. It would be better if a negative were limited to five or ten copies. Then there would be better pictures made, pictures full of pictorialness, embracing true values and fine composition.

Off there on the coast, where they are squeezing cod into boxes, stands a burly son of Erin, with a stencil. With two strokes of a blacking-brush he has made a very creditable outline picture on the end of a box, and he glories in the fact that he can duplicate that picture every moment. Over here in college, where they are arranging drawing-boards and easels, stands an eager student, with every fiber of brain and brush trying to catch some of the matchless beauty that shines from a celebrated cartoon upon the wall. The coast picture represents packing-house men putting down fish. The college picture represents a scene in Palestine, men also putting down fish, but at the feet of the only true and perfect Man that ever lived. Beyond the astonished Apostles is the hungry multitude — on the ground are the five loaves. The coast picture, gentlemen, is a mechanical piece. The college picture is a masterpiece. The difference is in the men that made them.

One is by Michael Delano, the other by Michael Angelo.

Charles P. Marshall.

A CHEERY GREETING.

How do you do, Mr. Todd? You don't know me? Well, that is why I am writing to you now. I have wanted to make your acquaintance for some time and expected to meet you at the National Convention in Buffalo this year, but circumstances would not permit. I owe you something, and as you may not know about it I will explain.

Some three years ago, while working in a photo mill as a photographic dermatologist, the proprietor subscribed for The Photo-Beacon, and I had the pleasure of reading it as it came to the place each month. At the end of the year said proprietor concluded not to renew his subscription, saying that it was only of use to amateurs, but professionals like himself were not in need of it. I went at once to the news-stand and have never missed a number since.

F. G. Monteverde, Chicago Salon.

FRUIT.

My retouching stand was in the operating-room (in my own place I call it the workroom), and I had an opportunity to see all the sittings. Here I often felt that a little use of brains would result in much better work and that photography might be made a business of pleasure as well as profit, and I have found out by experience the more pleasure the more profit. Renting a little room up three flights of stairs, I started in business for myself and I now have all I can do.

Lately I have taken up photo illustrating and will send you some of my work soon.

But I am getting away from what I started to do, and that is to thank you for the light given me by your BEACON. I take five other publications of a similar kind, but value the BEACON most and hope some time to meet, shake hands and thank you personally for the BEACON'S light.

Sincerely yours,
A. L. ALEXANDER.

IVORYTYPES, AND HOW TO MAKE THEM.

BY J. W. TAYLOR.

CHAPTER II.

NECESSARY PARAPHERNALIA.

For Ivorytype painting the following articles will be necessary, and may be procured, in part, from any artists' supply house, such as paints, brushes, convex glass; the paraffin wax at druggist's. The remainder you probably have in the house:

One-half dozen cabinet size convex Ivorytype glasses	$0.30
One-half dozen card-size glasses	.15
Two fine sable point paint brushes, sizes about No. 2 and No. 4, about................	.15
Of paints usually six tubes are all that are necessary. Get Winsor & Newton's oil paints, one tube each of white, rose madder, Van Dyke brown, prussian blue, chrome yellow and ivory black (about 6 cents per tube, except rose madder, which is higher), say about...	.50
One-half pound of paraffin.....	.10
One fine comb, with plain, smooth curved ends..........	.05
One sheet of No. 00 sandpaper and one of No. 1............	.02
One roll of passepartout binding strips	.10
Total	$1.37

Unlike most new diversions, the continual cost of which to some proves almost prohibitive of their pursuit, the above first cost will be found to be the total expense entailed, as the paints, brushes, paraffin, etc., will last almost indefinitely.

You will also require a package of Kingsford's Oswego Silver Gloss starch, a small bottle of turpentine to clean brushes with, and a pan about 5 by 8 to melt paraffin in. These last articles most any kitchen will supply. If one has a supply of old plates he may clean them perfectly and so dispense at first with the convex glasses. An old negative will do nicely to mix your paints on. The paraffin should be melted in your tin pan and kept for use as directed later on. It will readily melt of itself, over a low blaze or fire.

While the details of this process may at first appear somewhat formidable, I intend to make every move so explicit that you can make no mistakes, and when success has crowned your efforts you will thank the writer for his painstaking instructions.

"THE PHOTO-BEACON" LIGHTENS AN ALASKAN WINTER.

SEALEVEL, ALASKA.

DEAR SIR,—THE PHOTO-BEACONS for the two subscribers, recently sent for, arrived yesterday and one of them told me to-day that he had already received more than the worth of his money from one article alone. These will make thirty per cent of the residents of this burg, including myself, subscribers to THE PHOTO-BEACON.

A farmer's wife once told me how she raised chickens. She said she would put about fifteen eggs under each of two hens, out of which she would get an average of twelve chickens from each hen. Then she would take the brood of one hen away from her and give it to the other, making her the apparent mother of twenty-four chickens, and, as she expressed it, "That is about as good as you can do with a hen." So I think this is about as good as I can do with Sealevel, at least until more people come here to live.

A pro rata increase all over the United States would make quite an appreciable difference in your subscription list.

Wishing you abundant success and prosperity, I remain, Very truly yours,
WILLIAM H. WASHBURN.

PUBLIC CLAIMS UPON AMATEUR PHOTOGRAPHERS.

While at first this may seem to be a strange subject for an article designed for publication in a photographic journal, if the reader but stop and consider for a moment, he will readily discover abundant material under this heading for profitable thought.

It somewhat resembles bicycling, in that before one adopts the wheel as a means of locomotion, exercise or amusement (or perhaps all three), there exists a feeling that bicyclists, having chosen such an unconventional means of travel, have no place on earth except as nuisances and should be granted no legal rights whatever; while, after becoming familiar with the pleasurable pastime, it seems to be the only up-to-date means of travel, owning all the right of way, regardless of law and courtesy. In due time, however, such extreme ideas become more or less modified by contact (often violent in character) with the traveling public, until the happy medium of common sense prevails.

L. M. Kaiser, ON THE SLOPE OF TAMALPAIS. Chicago Salon.

An amateur photographer, blessed with the average amount of enthusiasm and fair opportunities for practice, must be far above the ordinary human being in order not to permit his zeal to outrun his better judgment and sense of propriety, so as to quite seriously infringe upon the rights of the general public, not mentioning the members of his own family circle, who have become accustomed to enduring his peculiarities.

While it would be useless, in so short an article, to attempt enumeration of all these interesting acts of oppression and annoyance committed by the amateurish amateur in his moulting stage, we will recall a few of the most prominent ones, which have occurred so frequently as to attract general attention. We can most of us recall instances in our early career as "camerists" which stand out in our recollection with painful distinctness as examples of base discourtesy which we would gladly forget but can not.

In these past occurrences, during our early experience, none of us for one moment thought at the time that we were overstepping the bounds of propriety or claiming more than our moral and legal rights. It is as a warning to the thoughtless amateur that these words are addressed, hoping that, profiting by the history of others, he may avoid similar mistakes.

1. As the primary warning, let me caution the amateur who has recently purchased a camera and succeeded, after many failures, in obtaining a print (his virgin effort's reward) that he keep it as jealously guarded as he would a diamond ring which he had stolen, putting it carefully away in some safe place rather than to afflict all his friends by exhibiting it and thus lead them into the natural temptation to sin by declaring it to be a particularly fine picture, when their judgment says otherwise. Such an act becomes more intensely villainous when it is perpetrated upon some poor clerk in a photo-supply store, whose conscience is already sore and weary from the regular wear and tear of his daily duties, selling goods to poor amateurs who do not know what they actually need and so are profusely supplied with barrels of worthless truck which can never be of any earthly service except as reminders of wasted funds.

Secondly. If you, my amateur friend, can not afford to purchase all the paraphernalia which you consider to be necessary for your regular work, better wait until your finances are in a more flourishing condition, rather than impose upon the good nature of some amateur friend by borrowing from his kit. You little know how very reluctant he feels about loaning utensils which you, in your ignorance, may totally ruin for all subsequent use. You must learn the care of these things by expensive experience, and honesty demands that you experiment with your own property. The writer once had a lens beautifully marked by the rough, calloused finger of a borrowing friend who in this manner wiped off the dust. He never knew it, but I did, for I saw him do it as he handed it back to me. His experience, my expense!

Thirdly. Do not boast of your own work or criticize other people's until you are quite positive that you know the difference between good and poor. Nothing is much more ridiculous than to listen to a six-weeks' amateur discoursing on tone, light values, etc. Even after having quite fully mastered the mechanical part of development and printing, you have yet to become educated in the real artistic sense, which only comes with long experience and not always even then if the learner be not blessed with that peculiar refinement of brain substance we term "gift." It is this which distinguishes the simple photograph from the artistic picture, a prominent distinction which can be so easily seen but is so difficult to describe.

Fourthly. Do not insist upon decorating the walls of your home and office with the fruit of your first efforts or delight(?) your friends with holiday presents in the form of such inflictions, expecting letters of thanks and praise.

Fifthly. Don't — Oh, please don't — invite your best friends to sit for their portraits and then exhibit your caricatures to the public until you have some practical knowledge of retouching. These exact reproductions will certainly emphasize the sitter's natural imperfections, often recalling to notice lines and furrows which a pleasant voice and kindly disposition may have previously concealed. How often we learn to love a person with a countenance decidedly unattractive to a stranger.

Sixthly. Never, if you consider yourself a gentleman, photograph a friend or prominent person — any one in fact — without first having obtained consent to do so. The custom of taking snap-shots under such circumstances is contemptible and beneath any person possessed of decent self-respect. It has done more than anything else to dim the once shining popularity of amateur photography.

Seventhly. Concerning your treatment of the editor of your photographic journal, you should exercise intelligent judgment. When you try a published formula, be exact in your measurement, use only C. P. chemicals and follow directions explicitly. The failure in nine times out of ten means your own ignorance rather than an erroneous formula. Even if you feel positive that you have discovered an error, before you employ harsh words in criticism, you should recollect that the editor is not supposed to have tried every recipe in the journal before he publishes an article, but rather that he considers each in the light of his general knowledge and experience, together with the known reputation of the writer.

Virginia G. Sharp, Chicago Salon.

SUNSHINE.

Eighthly. If you are a professional man who serves the public for a livelihood and take up photography for amusement and relaxation only — keep it as quiet as possible. If it be generally known, your interested friends (?) will term you a "crank" who has adopted a hobby which "has removed all interest in his business and takes so much time from his regular duties as to render him untrustworthy." This idea forms a fine weapon for your contemporaries, who will wield it day and night to your disadvantage. Even dear old Doctor Holmes, who ran a bracket saw and lathe for relaxation, took great pains to conceal it before admitting a visitor.

Without longer wearying the reader by continuing on to "nineteenthly," like an old orthodox sermon, as we certainly might without running short of material furnished by the subject under consideration, we will proceed to close by advising the beginner to avoid unpleasant results by adopting the motto of Charles Reade's story, namely: "Put yourself in his place." Think before you act, and mentally change places with the general public, and thus avoid error, always remembering (as an old deacon in my town once said in prayer-meeting) "Sin, in and of itself, is very sinful."

Leonard D. White, M.D.

PHOTOGRAPHY MAY NOT BE ABLE TO LIE, BUT IT IS EVIDENT THAT THE PHOTOGRAPHER CAN.

A subscriber in the Northwest encloses the business card of a St. Louis photographer, which is worded in the following terms, and asks us how it can be done. We give it up.

"BIG DOINGS"
At St. Louis 1904.
All Styles Cabinet Photos $2.
MARVELOUS RESULTS IN PHOTOS.

Hair put on bald heads; cute dimples inserted in cheeks; teeth removed if necessary; thin people made stout; scowls removed from somber faces, and winning smiles substituted; homeliness banished; intelligence inserted in vacuous countenances; goo-goo eyes, longing looks and the baby stare furnished if desired. Classic profiles, Grecian noses and flashing eyes a specialty.

Pastels, Crayons and Water Colors.

REPORT OF EXECUTIVE COMMITTEE OF PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

Indianapolis, Ind., Jan. 12, 1903.

Pursuant to the call of the President, J. George Nussbaumer, of Buffalo, New York, the executive board of the Photographers' Association of America met in executive session at Indianapolis, with the following members present: J. George Nussbaumer, president; J. E. Giffin, second vice-president; F. R. Barrows, treasurer; G. G. Holloway, secretary.

Mr. C. H. Collings, the first vice-president, having accepted a position with the Standard Dry Plate Company, and not being eligible to serve on the executive board, tendered his resignation, and C. R. Reeves, of Anderson, Indiana, was appointed in his stead. The executive committee then organized as a whole and, on motion, it was decided to hold our next convention August 4 to 7, 1903, inclusive.

The secretary reported as follows:

Received on 1901 account	$ 197 50
" for advertising	979 00
" from sale of space for desks	1,963 25
" on entertainment fund	100 00
Total receipts	$3,239 75

The treasurer reported as follows:

Cash on hand January 1, 1902	$4,379 54
Received from membership and dues	2,196 00
" " Secretary	3,239 75
" " sale of ladies' pins	50 25
" " G. M. Edmondson	49 24
Refund, Trunk Line Traffic Association	17 00
Total	$9,931 78
Paid on vouchers	4,755 98
Balance on hand Jan. 1, 1903	$5,175 89

The president appointed George G. Holloway and J. E. Giffin a committee to audit the books of the secretary and treasurer, which were found correct and approved.

On motion it was decided to accept the offer of Das Deutcher Haus (The German House) as the most desirable place to hold our next convention.

On motion it was decided that our exhibition of pictures be strictly complimentary and that no prizes shall be offered, the committee holding that the educational features of the convention were most to be desired and that the exhibitor has a sufficient incentive in the production of his idea of the highest type of photographic portraiture to be compared with the product of other members of the fraternity.

The president then appointed the following committees: —

Transportation — J. George Nussbaumer, George G. Holloway.

Badges and Buttons — F. R. Barrows, J. G. Nussbaumer and G. G. Holloway.

Hotels and Accommodations — J. E. Giffin and C. R. Reeves.

Decorations and Hall — C. R. Reeves, J. E. Giffin and F. R. Barrows.

Association Review, The Official Journal — C. R. Reeves, F. R. Barrows and George G. Holloway.

Entertainment — J. E. Giffin, G. G. Holloway, J. George Nussbaumer and C. R. Reeves.

Printing and Advertising —J. George Nussbaumer and G. G. Holloway.

Committee on Information — J. E. Giffin.

On motion it was decided to call the publication authorized by the Association, the *Association Review,* the official journal of the Photographers' Association of America.

The following rules were adopted to govern the exhibition of pictures:

1. Exhibits may be framed or unframed at the discretion of the exhibitor.

2. The association will not be responsible for any loss or damage to pictures in its charge, but special precaution will be taken by the executive committee to insure the safe return of all exhibits intrusted to its care.

3. All pictures exhibited must remain until the close of convention and will not be delivered to any one but the exhibitor without a written order.

4. Applications for space in the Art Department shall be made to C. R. Reeves, first vice-president, Anderson, Indiana.

5. All pictures submitted for exhibition must be addressed to C. R. Reeves, first vice-president, care German House, Indianapolis, Indiana, forwarded at owner's risk and delivered not later than August 1, 1903. *All charges prepaid.*

6. Have your box covers screwed instead of nailed. Your home address must be marked on the under side of cover for return of pictures. The association will not be responsible for exhibits not packed in accordance with this rule.

7. Exhibits for manufacturers' and dealers' department to be shipped to George G. Holloway, secretary Photographers' Association of America, Indianapolis, Indiana, care

H. B. Lefroy, Chicago Salon.

THE SMOKY CITY.

of German House, *all charges prepaid,* and must be placed in position not later than August 3.

8. All boxes and packages will be accepted at any time previous to August 1, so that exhibitors need not feel any uncertainty about the safety of their goods. No exhibit will be allowed to be removed from the hall until close of convention.

9. No manufacturer or dealer or their representatives shall be represented on the floor of the hall unless he or they rent floor space or desk room, and the manufacturer or dealer shall in addition pay $2 for each representative attending the convention.

10. Employes to gain admission to the convention at employes' rate ($2) must furnish certificate from employer or be endorsed by two active members of the association.

11. Dues shall be paid to F. R. Barrows, No. 1873 Dorchester avenue, Boston, Massachusetts. Membership $3, annual dues $2.

GEO. G. HOLLOWAY, Secretary,
Terre Haute, Indiana.

P. S.— By promptly paying your dues to the treasurer you will avoid the necessity of standing in line at the box office.

SUGGESTIONS ON SNOW PHOTOGRAPHY.

The season has come round again when we can expect to find, almost any morning, on peering out into the world from our bedroom window, everything covered with beautiful white snow. To a photographer the first snow of the season stirs up a feeling of intense enthusiasm, a new lease of life is given to him, for anything more suitable to photographic treatment than a good snow scene is difficult to find.

In the first place have a jolly good breakfast, then find a sound pair of boots, a thick coat, and wear leggings; then, thus fortified, fill up the camera, which should be of the box variety, the stronger the better, with rapid plates, and start for the country, to previously discovered subjects, but always on the lookout for fresh subjects, too. On expeditions of this sort one never does take enough plates; subjects abound, a streamlet through a snow-covered meadow will afford a morning's work, or a silver birch wood should produce something out of the common, a few stray sheep will give you plenty to think about and give ample opportunities for picturemaking. And if you should find a good background of snow-covered trees, or such like, it often pays to go back and humor those few lost sheep to come with you to help to make a picture. A frozen marsh, with dried grasses on the bank, is an excellent spot to hunt subjects; then there may be a dark wood, where the sun only penetrates here and there, but if the wood is anythink like, these bits of "here and there" are well worth photographing.

By all means, if possible, get the assistance of the sun; it is a great factor in snow pictures, and an otherwise flat, uninteresting spot will at once burst into magnificence if the sun will only play upon it. Some writers even go so far as to lay down that it is impossible to take snow scenes unless the sun shines; this, of course, is open to question, as several very fine exhibition pictures have been produced without any direct sunlight in them.

What opportunities for composing your subject are here! A few well placed footprints made by your big boots will often divert the entire composition and lead the eye to the desired spot. Almost every snow scene is improved by a path of footprints going in some particular direction, and it is one of the finest phases of snow photography that we nearly always have the option of providing that path, and accordingly of deciding in which way it shall lead. It is amazing what light there actually is in a sunlit snow scene. I would advise very small stops and extra rapid exposures for such subjects, almost the same speeds as you give to produce a sky negative; in fact, I have not yet come across anything in this world that was much lighter in tone than sunlit snow. Then, in developing, don't try for a pretty looking negative. Keep it rather thin, almost underdeveloped, for it is the detail in the snow that gives that charm to snow photography; the sky tones will take care of themselves, so will objects that come in the field; but sacrifice everything else, so long as you secure detail in the lightest part of the snow.

If, however, the development should get beyond control, and a strong negative result, then print that one in carbon, and in the same way a too thin negative should be helped up by printing always on bromid papers.

Snow pictures are lovely things to fake. Of course you shouldn't fake, and we generally keep such things dark, and speak of them as though they were illegal, but anyhow I don't see why we should not sundown a sky to help the lightness of the foreground snow, or, say in a carbon print, invite a little of the pigment to come off where we think the snow should be a little whiter, and so on; but such things should be carefully considered beforehand, or otherwise the balance of nature and its lighting will go all wrong and betray you and your little tricks.

Owing to the almost entire absence of color, a snow picture comes out almost exactly as we saw it, and to this is attributed the fascination that such pictures have; in fact, for the correct rendering of a snow effect, the camera man is a long way ahead of his artist brother, who has to acknowledge the glorious brilliance and sparkle of the photographic rendering. The camera man certainly has a great advantage over the artist here, for while the photograph is taken in a few minutes, the artist must be fired by enormous enthusiasm who would "stick it" for more than half an hour. I think it is to this low temperature, combined with

George H. Scheer, Chicago Salon.
FLEURS-DE-LIS.

cold drafts, etc., that we find so few artists who will give us snow in its truthful tones to nature. So here is a chance for photographers to shine—wrap up well, get out early in the morning, and with camera loaded there is nothing to fear, and the grandest phase of photographic art opens out on all sides to us and simply asks to be "taken."—*The Amateur Photographer (England.)* HARRY WANLESS.

HANDBOOK ON DEVELOPERS.

The developer pamphlets of the well-known Actien-Gesellschaft für Anilin-Fabrikation, Berlin, Germany, having met with great favor in all photographic circles in the United States, where they had a circulation of one hundred thousand copies, the firm has been induced to issue a new edition, of which we have a copy in hand. The tastefully bound booklet bears the title, "Agfa-handbook of the Agfa-developers and Specialties of the Actien-Gesellschaft für Anilin-Fabrikation," and contains in eight pages very instructive information on the excellent Agfa-developers: Rodinal, Eikonogen, Amidol, Imogen, as well as on Agfa-intensifier and Agfa-reducer. An abundance of well-proven formulæ and hints and opinions of prominent photographers, etc., make this handbook very valuable for consumers of Agfa manufactures and for those who intend to become such. We strongly advise all interested to procure a copy, which can be got from any dealer or from the United States agents.

FIRST ANNUAL SALON OF THE CLEVELAND CAMERA CLUB, CLEVELAND, OHIO.

The above club has just issued a circular announcing that its first Salon will be held from March 23 to 29, inclusive, and that all pictures submitted must be delivered on or before March 10 at the club rooms, 625 Caxton building. All communications and inquiries concerning the Salon may be addressed to the club at the above address.

A POINT IN SPELLING.

A Milwaukee reader writes: "Dear Sir,—Please tell us why the final *e* is dropped in bromide and chloride in your December issue." *Answer.*—Please see Webster's dictionary. But, after all, English spelling is an absurd proposition, anyhow. It first crystallized under the influence of a lot of ignorant printers, and now we accept certain individuals as authorities who are no better than anybody else. When they change we do. The only rational method of spelling is according to sound, as far as that is practicable. Our literary bugaboos exert their influence almost entirely in endeavoring to fix present forms of expression and of spelling, while as a matter of fact language is in a constant state of fluidity. This is most evident during social upheavals, when a new crowd get control of things and impose on the multitude their ideas, forms and linguistic peculiarities. But, by the way, this is not photography. F. D. T.

G. CRAMER DRY PLATE CO.

The above firm announces that, at the request of a committee representing professional photographers it has decided to reorganize its stock on a coöperative plan by permitting those interested in the consumption of dry plates to become possessed, by purchase, of about one-third of the capital stock. The capital of the proposed new company will be divided into shares of $100 each, and as there is no preferred stock all stockholders will share alike in the profits of the new company in proportion to the amount of their stock. In addition, shareholders will be permitted to buy the product direct from the factory at full trade discount, thus insuring them immediate profits in proportion to their purchases. The aim of reorganizing is to make, through coöperation, a business enterprise of photographers, by photographers, for photographers. All those interested will get full particulars on application to the G. Cramer Dry Plate Company, St. Louis, Missouri.

DEAR SIR,—You remember long ago how I asked you for information as to placing prints upon glass? Let me give an item for your magazine that may help out the Christmas gift idea.

I take a "spoilt negative," and, goodness knows, I have lots of them, and I place on the back of one (under water) my print, then press firmly to the glass under a weight for fifteen or twenty minutes. Then I examine print and if it adheres to glass all right and at same time the film is moist on negative I go to work. First I try the center of negative with a cloth dipped in hot water. I rub film off clean and continue this as far out as I desire my picture to show its frame; then I dry print and negative, and lo! I have a pretty ornament, use up surplus negatives, also have a picture framed, glass and all complete. I often paste on the back of print some of the black paper, paste in between a bit of ribbon or string, and when dry I have a picture for my wall and cord to hang it up with.

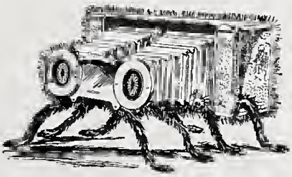
It was so kind of you to send the directions, I want others to share it also.

MRS. L. E. SACKETT.

Frank Green, Chicago Salon.

AMONG THE FOOTHILLS.

Oh! the Stereo Camera had a bad fall
And ruined her beautiful eyes.
She tried in vain each Stigmomat
That makers advertise;



But none of them gave to her ground-glass brain
A picture bright and flat
Till the Camera-oculist fitted her out
With a B. & L. Plastigmat.

NOT SO EASY AS IT LOOKS.

THE PHOTO-BEACON for December is at hand. Referring to my calf picture, which you reproduced in excellent style, would say, that while it looks as if it might be a time exposure, it really was a difficult thing; the calf butting the young lady all over the lot, and switching its tail furiously.

Yours truly,
LOUIS FLECKENSTEIN.

A CLEARING bath for negatives which have become covered with yellow fog from development with pyro or hydroquinone is as follows: Ferrous sulphate 33 grains, alum 11 grains, citric acid 11 grains and water ½ ounce. The fixed negative is first washed and then placed in this bath for two or three minutes, then again well washed. A clear negative having a blue-black color may thus be obtained.

EDITORIAL TABLE.

FROM TAYLOR, TAYLOR & HOBSON, St. James building, Broadway and Twenty-sixth streets, New York, N. Y., we have received copy of a pamphlet entitled, "The Principles of a Lens Action," which is a very plain yet scientifically correct exposition of a great many points about a lens that every photographer ought to know. It will be willingly sent on application to the firm.

THE STANDARD DRY PLATE COMPANY, Lewiston, Maine, have re-issued its booklet on dry plate manipulation but with a very valuable article on "Development Simplified," by Milton B. Punnett, the chemist of the factory, which is practically based on the researches of Mr. Alfred Watkins and with which the writer has experimented a great deal. The booklet is a very handy thing to have in the house because it is written in very simple language, and being the work of an expert in photographic chemistry can be relied on. It will be sent on receipt of request.

WE have to acknowledge the receipt of "Die Dreifarbenphotographie," by A. Von Hubl, a well-printed and well-edited volume devoted, as its name implies, entirely to the problem of three-color photography.

It is seldom that we have so much pleasure in reviewing a book as in this case, for the subject is handled in a masterly manner by a master, and for the benefit of all workers in "trichromatism" we hope that the date is not far distant when it shall be translated into English.

This volume is the second edition of that published first in 1893 and has been brought close up to date in all particulars. The first portion of the book deals with the theory of light and color, and then passes on to the theoretical and practical conditions which govern the manufacture of color filters, the color sensitizing of plates and the staining of the three films. Special portions are devoted to the theory and practice of three-color printing (typographical) the volume being supplemented by the addition of two inserts of color charts which will bear much study.

Taken altogether the volume represents in itself not only a "handbook" for the beginner, but a book of reference to the advanced worker, and to readers of German should find a ready sale.

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Published Monthly.

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All communications relating to THE PHOTO-BEACON should be addressed to

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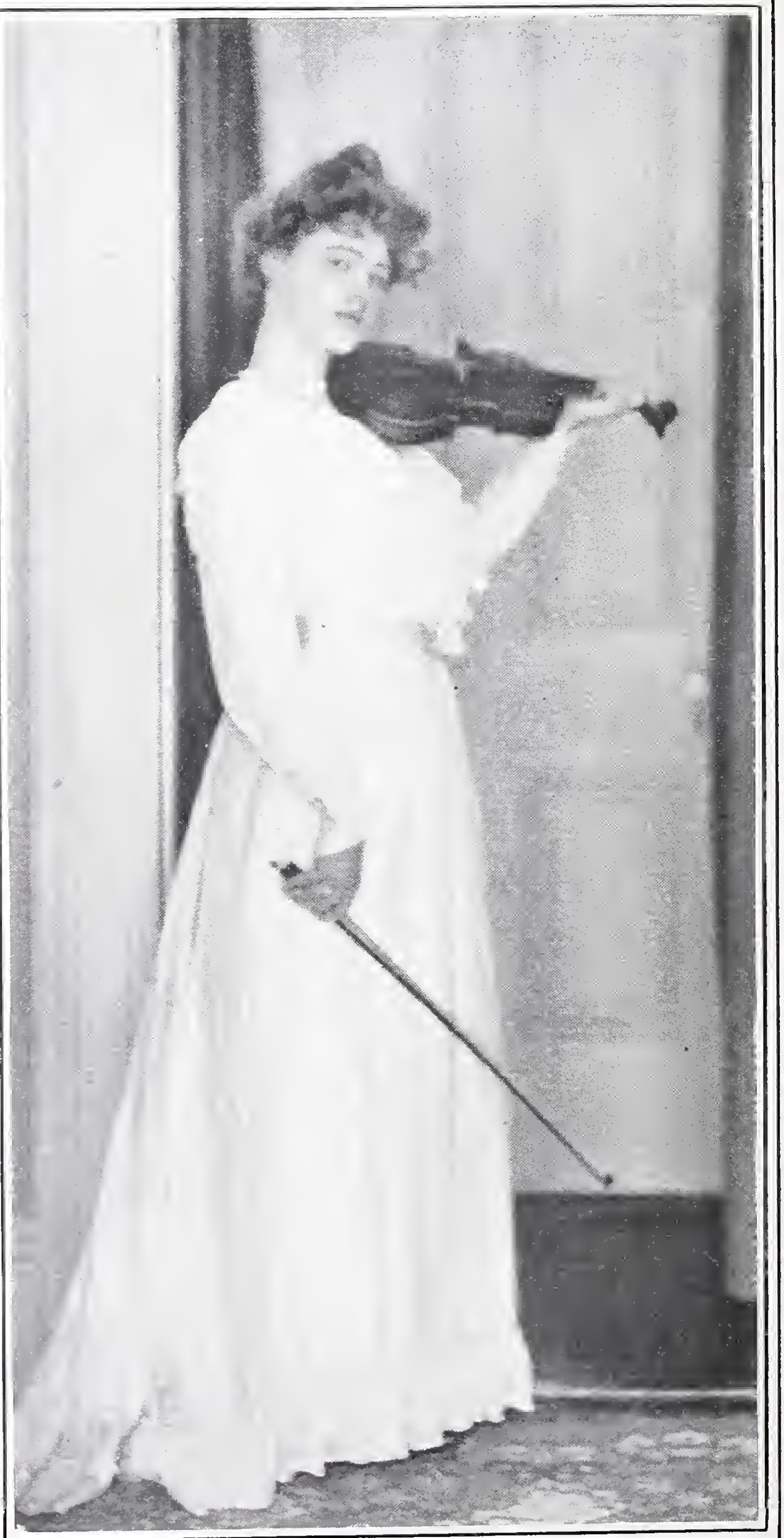

Negative by Emma de Zsalavsky, Capital Camera Club, Washington, D. C.

THE VIOLINIST.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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DIRT.

A famous English statesman will live through the ages to come more from his definition of dirt than from his masterly handling of British politics and foreign policy. He defined it as "matter out of place," and any one who dabbles in photography should have this definition seared into his mind, if necessary, with a redhot iron, because I am convinced dirt will cause more trouble in photographic manipulations than almost anywhere else, excepting possibly in the mechanism of a delicate watch. Once in a while it is my fortune to watch the handling of a dry plate or a print in the workrooms of both amateur and professional photographers, more especially when I have been called in to give advice as to the cause of troubles that are giving annoyance. I find in the case of those who are fortunate enough to possess darkrooms given over especially to photographic work, and this condition is true with almost every professional photographer, that it is almost invariably the rule that the floor and shelves are simply littered with all kinds of truck, such as empty boxes, bunches of black paper and anything else that happens to come along. More than that, I have frequently been horrified to hear my feet crunching through a layer of hypo crystals that have evidently been accumulating on the floor for years. The trays generally are set aside in a wet, sloppy condition, without even being rinsed, and the measuring glasses are usually amber tinted from accumulations from past years. The shelves exhibit a perfect forest of crystalline trees that is like nothing so much as the mold that grows on bones that are allowed to lie in some damp dark corner. Such a darkroom is emphatically dirty, that is to say, it contains a vast amount of matter that is unquestionably out of place, matter that bears within itself the power of very speedily changing its location. While lying on the floor or on the shelf it can not do much harm, but the slamming of a door may, in fact certainly will, cause a current of air that will send thousands of small particles of dust flying all over the place, which particles will subside whenever the air becomes quiet again, and will be as apt to settle down upon the developing or toning tray as anywhere else.

I have frequently talked to workers about such possibilities and have generally been quietly informed that no harm had ever resulted from such conditions, but when I had begun to describe some of the effects that could be produced from such carelessness it is surprising how frequently the eyes of my listener waken up, and then I am not infrequently asked, "Is that the cause of such and such a defect?"

Let me describe a few of my experiences. In the early days of my photographic career a pound of hypo was made up of a very considerable number of substances that were not included in the chemical formula that represents this salt. It almost invariably contained a considerable quantity of straw, bits of wood, sand, stones, etc., and so it was essential that the solution should invariably be filtered. On one occasion I was busily engaged making up a new hypo bath and I had the misfortune to drop my glass filter, with the result that it was put instantly out of use. Necessity being the mother of invention, I at once helped myself to an empty tin can, punched a few holes in the bottom, put in a layer of cotton wool and chuckled at my ingenuity in providing myself so easily with an impromptu substitute. On examining my negatives the next day I was amazed to discover here and there very large brown spots, and also a considerable number of small ones, the latter of which were usually endowed with little tails that made the spot look like a picture of "wiggle tails," such as may be seen wriggling about in a silent pool in spring time.

Here was a problem to be solved and I carefully went over all my procedure and I remember it took me a considerable time to make up my mind as to the cause of the defect, but at last I reached the conclusion that my so-called tin can was the source of the trouble. It may be rather surprising to some of my readers to learn that sheet tin contains very little of this metal; that, as a matter of fact, it really consists of a very thin layer of iron which is coated on both sides with an even thinner layer of tin so as to prevent the iron rusting. When I punched the holes in the bottom of my can I exposed the iron, and the solution in filtering through picked up a number of small particles which were resolved into oxide and deposited in the form of a fine brownish deposit on the face of the plate, where it was emphatically matter out of place.

I had learned my lesson and for a number of years I kept my eyes open for iron in any form whatsoever, but the next time I came in contact with it it landed on me in big chunks. I was then employed in the photographic department in the World's Fair. We were rather handicapped for accommodations and so our chemicals, plates, instruments, etc., had to be disposed of wherever we could find room for them. I remember that the hypo was bought in hundred-pound lots and came to us in rectangular cases. One box that came about the beginning of the winter was opened and the lid having been pretty badly smashed, the contents were open to every influence that happened to come along. The steamfitters were working all over the place, putting in pipes or radiators, and I remarked to my employer about the possibility of getting into trouble, but as he had never had any experience like mine he pooh-poohed my suggestion, remarking that he had frequently made up his bath with hypo that was simply covered with dust and that if it were run through the filter it was always all right. It was not my place to argue the question and so I let it go.

In due course I had to make a new bath and while doing so I took care to remind my employer of my fears so that I would be on the safe side if anything occurred. It just so happened that the next day I made about two dozen 11 by 14 negatives, and I remember well the scene that took place the following morning when I entered the workroom. My employer, without giving me time to take off my coat, marched me up to the rack where the negatives were drying, picked up one of them, put it into my hand and asked me what in thunder that meant. I was able to inform him that if he would block out the foreground the negative would produce a very fair suggestion of a scene with snow falling, because there was not one quarter of an inch of it that did not have at least one little brown spot with a tail to it and the negative, as a whole, looked as if some one had skilfully scattered ink all over it with a tooth-brush. Every one of the two dozen negatives was a fair duplicate of the first. I got no row that morning, because of my precaution when making up the bath. The mischief was there and the trouble was to find a remedy. Luckily for me, I happened to have in the studio a good book on chemistry, and feeling convinced that iron was the cause of the trouble, I immediately looked up solvents of iron that would not dissolve silver and I found that sulphuric acid would fill the bill. There happened to be one ounce of this in the darkroom, so I added to it twenty ounces of water and immersed one of the plates to see what would happen. Both of us gave a great sigh of relief when we found that in less than two minutes every spot had vanished and the remedy was applied to each negative in turn.

Some years ago I happened to have a little talk with the chemist of a paper factory over trials and tribulations in photography, and he told me that for six months he was almost worried into his grave by spots on his paper. In fact, they had got so bad that he was on the verge of quitting business. Sometimes he would have a lot that was absolutely perfect and the very next day every bit of paper that came off the machine was bad and sold as "seconds"— in fact, he was manufacturing more "seconds" than he could comfortably sell. He suspected the presence of iron and followed every stage of his procedure with a careful eye, but for his very life could not detect where it could be introduced into the emulsion. He tested the paper, gelatin, silver and bromid, but found them faultless. At last, one Sunday he went down to his factory determined that if he did not find the trouble he would quit business the following day. One of his first acts was to go into the coating-room and remove the coverings from the windows so as to allow a full blaze of light to enter. A coating-machine is practically made of wood, and he walked all around it to see if there was a possibility of iron being present, and as he did so his eye caught a glint of polished metal. This was the chain and the wheel that drove the roller, and the high polish indicated that particles were being worn off by friction. A sudden movement on the part of one of the girls attending the machine would cause her skirts to disturb the fine parti-

Negative by Dr. W. E. Diefenderfer, Capital Camera Club, Washington, D. C.

THE LATEST MAGAZINE.

cles and set them flying in the air only to fall on the wet emulsion on the paper. He at once moistened the offending wheel and chain with oil and his troubles vanished.

I think I have said enough to make every one of my readers realize the importance of getting rid of dirt in the workrooms. The most successful photographers in this country, I think, keep every part of their establishment absolutely clean. The first thing they do in the morning is to go over every article in the workroom and the floors with a damp cloth so as to lick up clean every particle of dust. In examining a plate it is invariably held where the drippings will fall into the sink, and after it has been through the fixing bath, should an employe be found holding it so that the drops will fall on the floor, the penalty, at least for a second offense, would be instant dismissal. The shelves on which the chemicals stand are either thoroughly filled in with some waterproof substance or they are coated with oilcloth, so that they can be wiped absolutely clean every morning.

In many parts of this country the water contains a very considerable amount of iron in solution with the result that brown spots appear in large numbers on the prints. While sulphuric acid will remove these defects from a gelatin plate, it seems to be unable to destroy them on the surface of a gelatin paper, and so prevention is the only remedy. The water must be free of the iron before it comes in contact with the prints, and luckily this can ordinarily be done by filtering it through a couple of layers of canton flannel.

F. DUNDAS TODD.

THROUGH the courtesy of the *Bulletin du Photo-Club de Paris,* we are in a position to show our readers the characteristics of some of the best work of French amateurs. The series includes three dozen illustrations, and these will be exhibited to our readers at the rate of about six per issue. Many of the studies are rather out of the usual run and will prove very suggestive to our readers.

PICTORIAL COMPETITION No. 57.

As a rule this competition is a very interesting one and of recent years a particularly fine class of work has been submitted; but, on the whole, the quality of the prints sent in this month are not as good as the judges expected. There was, however, some really good work submitted and the prize-winning pictures are above the average.

The judges made the following awards:

First prize — Curtis Bell, 558 Fifth avenue, New York city, New York.

Second prize — Mrs. W. W. Pearce, Waukegan, Illinois.

Third prize — C. H. Garner, Port Townsend, Washington.

SPECIAL MENTION.

Lewis R. Clerke, Louis Fleckenstein, Belle Johnson, Mrs. Pearce (2), Emma L. Williams, Arthur Gleason.

PARTICULARS OF WINNING PICTURES.

First prize — Made on Cramer plate and printed on Willis & Clements platinotype.

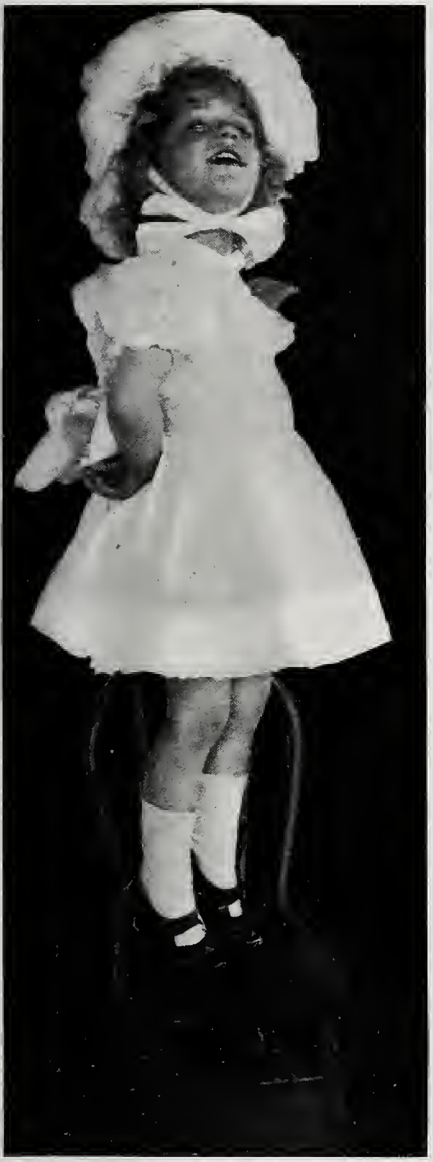
Second prize — Made on Cramer Crown plate, exposure ½ second, and printed on Willis & Clements platinotype.

Third prize — Made on Cramer Crown plate, exposure 1-5 second, and printed on Bradley platinotype paper.

CRITICISMS OF WINNING PICTURES.

In starting out to criticize the winning pictures I would begin by advising all my readers to go back to the January number and read the article on "The Greatness of Art," by Mr. Ruckstuhl, more particularly the paragraph which begins on page 20, where he specifies the elements of artistic power. These he considers as being conception, expression, composition, drawing, color, technic, and it is my purpose to take up these in turn in my comments on the prize pictures.

A great many years ago I was fortunate enough to pass an examination in geology, and I remember being very much impressed with a sentence that appeared on the diploma that was



Neg. by Curtis Bell, New York.

FIRST PRIZE.

awarded to me. "In nature's book I a little can read." At first I was rather puzzled over this quotation, but as I have grown older I have learned that there are various kinds of reading and that the printed page is one of the least important. I have learned more and more to read nature and find it a very interesting page indeed. I have also learned to read picture writing, whether by brush, pencil or lens, though not as well as I would like, but I have not yet learned to read what great musicians have written, although I vaguely feel that they have a story to tell to me, but being somewhat deficient in the music sense, I am afraid that their ideas will never become clear. I have no doubt there are other forms of reading and that I will learn them as I grow older. All this is introductory to the criticisms of these pictures. I want to tell what I read in them; that is, I want to tell my readers what I think the photographer tried to write by the action of light on a piece of paper.

In the first prize picture, I think Mr. Bell tried to picture the natural hilarity of a young child who is as free and as untrammeled in the expression of self as a young bird and I enjoy immensely the extreme naturalness of the pose, for I feel that her whole mind and body is simply lost to everything but the one thing in which she is interested, and the consequence is that from the top of her head to the tips of her little toes she is a picture of naturalness, entirely lost in the enjoyment of something that interests her. "See how big I am," she seems to be saying, and how proud of

her height she is. Even the chair is not high enough for she must stand on her tiptoes. This, then, is the conception. The purpose of expression is to show life, either the material or the spiritual. This little girl is full of material health and vigor, and as such, she is very pleasing to look upon, but it is not merely a charming body that we are gazing at, but one that is palpitating with a particular emotion, namely, that of pure joyousness, and this emotion is very well expressed indeed.

But the story must be beautifully told and this is where composition comes in, and I would draw attention to the very neat way in which Mr. Bell has so arranged his figure that the eye first catches the face, then swings to the left and downward to the arm and once more swings to the right and still downward to the knees and feet of the figure, thus outlining a very graceful S-curve which gives the needed variety to the very formal conventional lines of the white dress and back of the chair. I would draw particular attention to the dainty curves of the hat and face which form the apex of the rather straight lines of the little frock; and also to the curved lines of the back of the chair which contrast and give variety to the lines made by the lower limbs. The spacing has a tendency to be symmetrical, but it is redeemed by the beautiful curve outlined by face, hand and arms that I previously referred to.

The tone values are very, very dainty, and pure white and pure black are used very sparingly, the whole being worked out in a scheme of dainty half-tone.

The second prize picture is another bit of childish naturalness, where the young folks are having a good time over the colored supplements of the Sunday paper. The story is told very simply and effectively, each figure playing the part allotted in a very natural way. The arrangement is again very conventional, that is to say, symmetrical, the three figures forming a very clearly defined oval and the necessary variety is attained by grouping the figures into two and one, yet they are well knit together both by the bounding line and by the sheet of the paper on the boy's knees. I would point particularly to the great variety and spacing round about, whether it be the windows, couch, bureau, or the mass of the paper, even down to the little patches of shadow that are found here and there — all working to the same end of giving variety, and yet all the lines converge toward the heads of the group of two, thus binding them all together and giving them a natural focusing point. I consider the technic of this picture really very good indeed, because it is very difficult to photograph against the light and avoid deep black shadows and halation in such a subject as this, and altogether I consider the picture a very good one.

The conception in the third prize picture is very simple — just a child at play, and the idea is very well expressed indeed, for a little girl is entirely absorbed in her occupation. The arrangement is very simple in character and the lights and shades are handled with great skill. Black and white are very scarce in this print. A little touch of black on the sleeves and to the right of the figure gives effective key to the half-tones that revel through the head and hands, and the same remark applies to the small patches of white on the shoulder and in the bubble.

As in the January issue, I have asked the artists to reproduce each of these pictures in three tones in order to show that even when resolved into their simple masses the arrangement is very satisfactory. I want to lay special emphasis on this idea, because I want my readers in the future to think more of mass than they have been doing. I find that ninety per cent at least of the pictures that reach my office show that the average worker in photography has no conception of this; in fact, it seems to me that the key to composition lies in two words — mass and line — and I regret to say exceedingly that the average worker has no conception of these two very important factors of pictorial composition. F. Dundas Todd.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

FUTURE COMPETITIONS.

Competition No. 59 — Snow pictures. Closes March 31.

Competition No. 60 — Waterscapes. Closes April 30.

Competition No. 61 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.
2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.
3. Prints are not returnable.

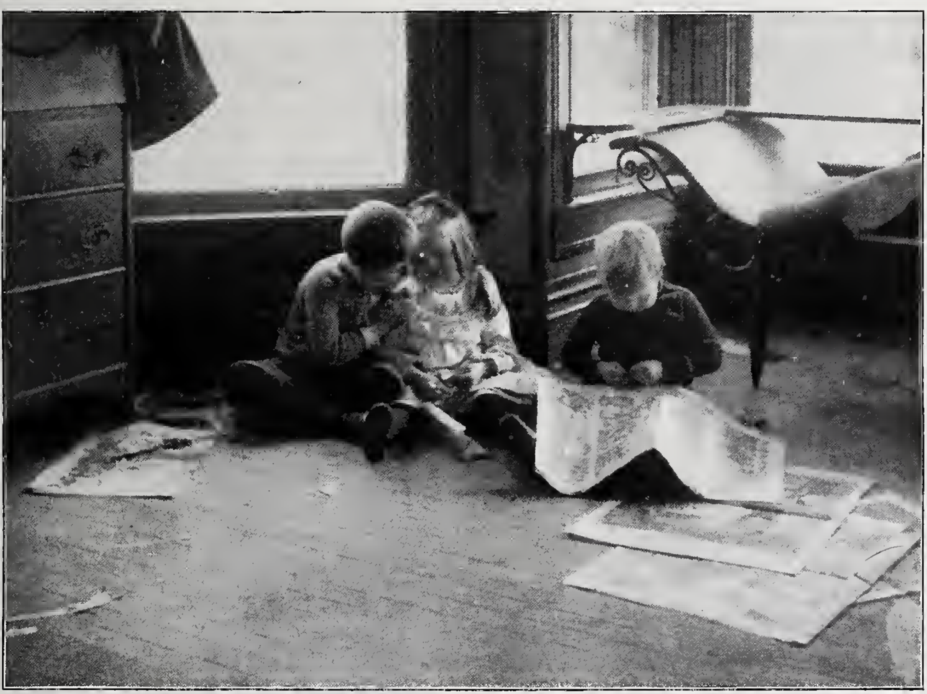
PRIZES.

First — Books to the value of $5.
Second—Books to the value of $2.50.
Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

THE CAPITAL CAMERA CLUB OF WASHINGTON, D. C.

The building up of a camera club is usually a work of time. Few photographic societies have sprung into exist-



Negative by Mrs. Pearce Waukegan, Ill.

SECOND PRIZE.

ence fully grown or strongly developed. The work has usually been arduous at the beginning and the burden, as usual, has been borne by a few enthusiasts.

Late in the month of April, 1891, a few young men gathered in one of the photographic stock houses for the purpose of organizing a camera club. As a result of this meeting the Capital Camera Club was organized, with a charter membership of nine members — not a large beginning to be sure — for at the time of organization the membership of the club was limited to twenty-five members, and it was believed at that time that the required number would soon be found.

Washington, at this time, was already represented by a camera club known as the Washington Camera Club, a society including in the membership many a well-known resident of the city, some of whom were considered almost perfect in the photographic art as it was then practiced and believed in; for in those days photography consisted of an exhaustless catalogue of facts, and artistic or pictorial photography was then limited to the production of a photograph of faultless technic, and perchance, if the photograph contained some pictorial element, it was classed as artistic. The art side was then but little known.

The Washington Camera Club, at this time, was poorly housed; the club was without a studio, and the possible possession of club quarters with a studio seems to have been one of the main reasons for the organization of the Capital Camera Club.

The rooms selected as the home of the new camera club were situated on the fourth floor of a building on the corner of Seventh and D streets, N. W., ,long used by different photographers as a "gallery." In fact, the quarters were badly out of repair; the skylight leaked, the walls and floors showed the neglect of years, and the three long flights of stairs and the class of work done in the old-time gallery had proven the disaster of many an old-time photographer; and there is a tradition that one of the occupants, hoping to better his condition, had resumed specie payments a little ahead of time, and his dies were captured by the United States Secret Service men, and the unlucky financier served his time in the penitentiary.

The rental, however, was low — provided the club would assume repairs — and club life was commenced under those cramped pecuniary conditions that have been the lot of many photographic societies.

Notwithstanding all of the hardships of those early months of club life, those days when each member acted as his own janitor, and when, to save expense, the secretary often notified the members near at hand in person of the coming meetings, the club organized an exhibition in November, 1891 — a little over six months after its organization. As I now remember that exhibition and compare it with the later exhibitions of the club, the progress made is highly pleasing. The first exhibition contained one or two platinum prints, developed in hot platinum solution — for cold development of platinum paper was then unknown, or, if known, but little practiced. Those prints were loaned by a Miss Needles, of Baltimore, Maryland, then considered one of the leading woman amateurs of the country. The

remaining prints exhibited were nearly all made on albumen paper, with the exception of a few bromid enlargements and an occasional blue-print. All of the work exhibited was of that strongly photographic type, sharp as the work of an engraver, bold in contrast, cloudless skies, mounts of the kind used by the professional photographer, and the portraits of the kind in vogue at the foot-of-the-stairs-showcase of twelve years ago. Our club members had been diligent observers, and had learned their lesson well. "As good as the work of the professional," was in those days the highest praise, and the words were sweet.

For seven long years the Capital Camera Club occupied these uncomfort-

Negative by C. H. Gardner, Port Townsend, Wash.

THIRD PRIZE.

able quarters and climbed the three long flights of stairs. In the meanwhile, the club had increased in membership and the limit of membership had been raised to forty. At the end of this time an earnest effort was made to raise the club membership to one hundred upon the promise of better quarters, more room, a single-slant north light for the studio, and one flight of stairs from the street to the club-rooms.

In May, 1898, the club took formal possession of the present quarters, 1010 F street, N. W., practically in the business center of Washington, and while the studio was specially built for the club and is one of the best in the country, the working-rooms of the club are exceedingly limited, and for a long time the committee on rooms have been in search of better quarters — a hard problem when so much is wanted for so small a price.

The practice of holding annual exhibitions has been followed by the club since the first exhibition was held in 1891. During some years more than one exhibition has been held, the second exhibition including only the work of club members. At the annual exhibitions an invitation is extended to all the amateurs of the District to exhibit; the two last exhibitions were held in the Hemicycle Hall of the Corcoran Gallery of Art, and the attendance has fully equaled that of the exhibition of the Water Color Club and the Society of Washington Artists.

Women were first admitted to active membership in 1894 and the list of woman members, while not a large one, has always included some of the best woman photographers of our city — capable, energetic and thoroughly congenial photographic comrades.

Washington is a city of many changes, perhaps of more changes than other cities of equal population. The tenure of official life is quite uncertain, and the members of the Camera Club keep pace with the population in the matter of changes.

Among some of the names borne on our club register in the years that have passed may be mentioned McCormick, who made night photographs years before the subject was exploited by Paul Martin; Douglas, whose interiors of the Library of Congress have been published and widely sold throughout the country; Jenkins, the inventor of the phantescope; Ferguson, the successful at-home portrait photographer; Dinwiddie, war correspondent and now governor of one of the Philippine provinces — these are the members of the past.

The club now contains many earnest workers, not partisans of a single school, but broad in view, progressive in spirit, willing to work, eager to learn.

The climatic conditions of Washington are not conducive to the building up of an energetic photographic society. It often happens that from May to October the heat is so intense that our studio is but little cooler than a furnace-room and to develop plates during the summer months is almost impossible, unless one wishes to take great chances of frilled negatives and unnatural chemical changes. From October to May the weather is such that it is far more pleasant to stay indoors, than to attempt outdoor photography. For these reasons the photographic season in Washington is somewhat limited, and the long interval of excessive heat restrains photographic interest and in a great measure acts as a handicap to that continuous interest necessary to the growth and success of a photographic organization.

Charles E. Fairman.

PHOTOGRAPHIC ASSOCIATION OF IOWA.

The executive committee of the above association announces that the next convention will be held on May 19, 20, 21 and 22, at Des Moines, and that the arrangements for an interesting and educative meeting are very encouraging. All of the leading photographers in the State have intimated that they are sending complimentary exhibits.

See the special offer, in connection with *The Home Bazaar,* made in the advertising pages. Those who have used the scissors think they are simply wonderful.

Copyright, 1900, by F. Haines, Capital Camera Club, Washington, D. C.

A BOB-TAIL FLUSH.

Anna S. Brooks, Capital Camera Club, Washington, D. C.

ASTERS AND GOLDENROD.

IVORYTYPES, AND HOW TO MAKE THEM.

BY J. W. TAYLOR.

CHAPTER III.

MAKING THE IVORYTYPE.

Having, as directed, equipped yourself with the necessary articles, we will now proceed to make an ivorytype, and to make it doubly clear and simple to those also who have no knowledge of photography, I will assume you have no unmounted prints, but have a cabinet photo you wish to paint. Such being the case, the novice will proceed thus:

Take the picture to be copied and place in a basin of clean water, face up, and let remain say over night, or until you can readily, and without danger of tearing, peel the print from the card freely. It will do no injury if you let it soak till it fairly leaves the card of itself. When removed lay print, face down, on clean sheet of paper and wipe paste from the back, gently. Then turn over, face up, and lay aside a half hour to dry. While print is drying prepare your starch paste, as this will be your next step, and, please to bear in mind, the most important one. Most any lady knows how to make starch, but for the benefit of the sterner sex who have not reveled in the mysteries of starchmaking I will give the necessary instructions: Take about a tablespoonful of starch and moisten with enough warm water to dissolve thoroughly and work out all lumps; now pour on just enough boiling water to make a good thick paste, say a tumblerful, and keep stirring while it is cooking till it looks clear and transparent.

Your print is now dry enough to proceed; but before we do so I want to assure you that you must use starch only, and the kind recommended is the best. Ordinary paste, photo-paste, or anything of that sort must not be employed, as you will ruin your picture if you try it.

Now get your fine comb, two or three sheets of writing-paper, about note size, your emery paper, and a convex glass. Clean the latter nicely and lay on table, concave or hollow side up, for this is the side you are to paste the print on; now pour on a couple spoonfuls of hot starch, not *too* hot, and with your fingers rub well over every portion of the glass until you recognize that peculiar gritty creaking glass makes when it is *clean*. This removes completely any oily finger-marks and prepares the glass for perfect cohesion. Next take your dry print and put through the same process, only putting starch on face side of picture, as follows: Apply starch liberally and work well over every part of the print with the balls of the fingers, flattening it down completely on the clean sheet of paper you have placed it on, working well over the extreme edges and all over thoroughly, taking care to manipulate it gently with balls of fingers not to cause wrinkles. At once scrape off what you can of the cool starch from your glass and spread over it a big spoonful of fresh hot starch. Don't be afraid of using too much starch, as after a little experience you will realize its necessity. Take print, starched or face side, and lay on starched concave side of glass, straight as possible, then lay over it a clean sheet of note paper, somewhat larger than your glass; take up in left hand, before turning over, between thumb and fingers, pressing picture down on glass in the center. Now take your comb, endwise, and holding it slanted about forty-five degrees begin to scrape out all the starch between the print and glass. Press it down firmly with thumb in center at first to locate the print on glass and to give you a base from which to begin the scraping-out process, for this is the most particular part of the work, as if all the starch is not completely worked out it will leave "bubbles" or streaks. So work from the center outward, rapidly, all around; you may now if you wish turn it over during this process from time to time to note the effect of your efforts. When you have thus scraped out all the starch, working gentle and without too much pressure, as otherwise you may crack the glass, you must remove the note-paper "shield" from back, wipe off picture all over with clean cloth, and examine. If well done it should adhere perfectly, with no wrinkles, streaks or bubbles; but should you detect one of the latter you may yet take the comb, and without the paper shield, work the spot of starch out to the edge, being careful not to tear the print. This is all really very simple and easy to accomplish and you will doubtless do it perfectly the first trial; if not, soak the picture off the glass and after it is dry, as before, try it over.

Having successfully transferred the print to the glass lay aside where it will dry quickly and thoroughly, after which take your coarse sheet of sandpaper, tear off a convenient sized piece, and with a circular movement begin to sandpaper the back of the print, the object being to wear away the paper until scarcely anything is left on the glass but the film; or in other words until the outlines of the figure or picture are plainly discernible from the back. Care must be taken to do this evenly and gently, to avoid wearing holes in the print; so for this reason the latter part of the sandpapering had best be done with your No. 00 paper. With a little experience you will learn to conduct the sandpapering part according to the nature of the picture to be painted. If a portrait, where the coloring tints are desired to be more delicate and suffused, stop when the outlines, eyes, etc., can faintly be seen; for landscape, and especially floral photography, reduce still thinner. While you have been doing this, have your paraffin remelting; now take your picture and immerse it in the hot paraffin, print side up, long enough to clarify. Watch it closely, till the print looks fairly transparent and, as in the case of the negative in the hypo bath, until all the graylike portions have disappeared, a very few minutes usually being sufficient. Remove and with some old soft cloth wipe off thoroughly and quickly all the paraffin. This must be done while hot, as if it cools on you it turns to wax and will have to again be submerged in the hot bath a moment, then try it again. When paraffin is well wiped off it is now ready to paint. If you have had no previous experience in painting, proceed to do as follows: With your finest brush first paint (on back of print) the whites of the eyeballs, pure white, holding glass up before the light to get the clear outline. Do not cover the pupil, for this must be painted blue, brown, black or even yellowish, as the color of the original is supposed to be. Then paint the collar, cuffs, waist, or such parts of the clothing as you wish to appear pure white. Next take your rose madder, with clean brush and on each cheek place a spot of pure red about the size of (O) this, or larger if the original possessed rather high color. Now with ball of one finger gently manipulate or "massage," if you please, this red spot until it is diffused over the cheek, merging to light at the outer edge. With the red brush paint the lips to suit, using brush only. This will be all you can do at present on the face, until the paint you have put on dries. However, you can proceed with painting your background, as fancy dictates, the hair, or remaining parts of apparel. The flesh tint is put on face and hands the last thing, after the previous paints are dry. To produce this, mix white with a touch of red, adding smallest possible touch of yellow. Be careful to get just a tinge of pink. Paint with brush *all over* the face.

Here, perhaps, your first knowledge of mixing tints will be acquired, if you be a novice, so the following formula for mixing various tints is given:

Red and blue will give purple.
Blue and black will give deep blue.
Yellow and blue will give green.
Yellow and black will give bronze green.
Yellow, blue and black will give deep green.
Carmine and deep vermilion will give deep scarlet.
Blue and little red will give deep lilac.

Keep your bottle of turpentine at hand to clean your brushes in, and to remove any misapplied paint, as one may sometimes chance to do. No hard-and-fast rules for painting can be given for this, any more than for any other kind of painting, as beyond these primary suggestions, to give you the right idea, your own good taste and judgment will do the rest.

So we may now consider your first picture practically finished and ready for mounting, ready for any manner of frame. The card from which the print was soaked, cut down to size of glass, will do nicely, though of course any kind of card will answer the purpose. Between the card (if it be a colored one) and the painted portrait put a sheet of clean white paper, as the effect is better. Now take your binding-paper or cloth and paste around the edges to neatly cement the backing and plate together, lap over on glass sufficient to give good bond, or as your taste may dictate, and mounting is done.

If, for the purpose of acquiring practice or other reasons, you desire to repaint the picture differently, all one has to do is to remove *all* the paint with cloth wet in turpentine and wipe clean and dry, when you can try it again.

As intimated at the outset this process of Ivorytype painting opens up so many avenues to the camera artist we will not undertake to here discuss them all, but in passing can not forbear calling the reader's attention to its great aid in floral photography, where the exquisite coloring alone is needed to render such prints veritable works of art. It is an especially attractive pastime during the somber winter months, when the amateur photographer's opportunities for outdoor work is curtailed.

IVORYTYPES IN PYROGRAPHY.

Ivorytype-making may be used as an adjunct to pyrography, with very pleasing results. Indeed its introduction thereto is productive of so many charming and novel effects that its application therein may truly be said to be restricted only by the ingenuity and taste of the pyrographer and the character of work in hand.

For a simple illustration, take for instance, a frame being embellished, or a placque, bracket, panel, or some such article. Now Ivorytypes may be made on all sizes or shapes of glass, so we presume you wish to decorate your pyrography piece with a miniature portrait of yourself or some friend; go to a watchmaker and get an ordinary convex watch crystal, good stout one; with a compass draw a circle where you wish to place the picture, just the exact size of the glass. Then with routing tool or jack-knife etch out sufficient to imbed the glass therein. All that now remains to do is to prepare and paint your picture in the usual way, only no mounting is of course necessary, though conditions and taste may decide this point. Having made ready the portrait, insert it in your prepared circle, paste in a rim of colored silk cord or any other fancy conceit you may wish, and the thing is done.

PASSEPARTOUT WORK

Is at present so popular and seen in so many homes, that I desire to call the reader's attention to the fact that by the use of this Ivorytype process one may take any illustration, half-tone or otherwise from any magazine or even newspaper, and make a handsomely colored passepartout, all ready to frame or hang up, without any trouble whatever. If printing appears on the reverse side simply sandpaper evenly until all printing disappears, leaving the white paper exposed, paraffin and then paint or leave plain as desired.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

Office of the Secretary, 673½ Wabash Avenue, Terre Haute, Indiana.

February 11, 1903.

MY DEAR TODD,— By an oversight, I failed to state, in the report of the proceedings of the Executive Board of the Photographers' Association of America, held in Indianapolis, January 12, that Wednesday, August 5, would be set apart as manufacturers' and dealers' day and that no sessions will be held during that date. Will you kindly make notice of same in your next issue.

Very respectfully and fraternally yours,

GEO. G. HOLLOWAY,

Secretary.

MISSOURI CONVENTION.

The Executive Committee of the Photographers' Association of Missouri announces that the convention of 1903 will meet at Pertle Springs, as in former years, but that the date has been advanced to July 7, 8 and 9, so as to have more congenial weather.

THE OUTLOOK.

After a comprehensive reading of "The Greatness of Art" and a comprehensive study of the reproductions of the recent Chicago salon pictures, one must truthfully say that photography is at a very uninteresting stage of her journey toward high art.

While we were struggling with technical photography, we were often able to see really beautiful things. Even with our first step toward pictorial photography we were yet able to see real beauty and to express it in our work. In both cases, we, at least, were able to enjoy the beauty we had pictured out, and judging from the expressions of pleasure coming from a few others, they, too, found enjoyment in our pictures.

But as we have advanced, and it is evident we are advancing, though most disgustingly slow is our progress, we have appeared to become so engrossed in showing forth a good knowledge of composition, tone values and technic as to completely forget that there exists in the world such a thing as a beautiful thought beautifully expressed.

The reproductions of salon pictures are, I suppose, as like the original as two things can possibly be. It is, also, to be supposed that these reproductions are from the best of all the exhibit. Mr. Todd tells us that the recent Chicago salon was not pitched in so low a tone as previous ones. Taking the above statements as facts, it is not a matter of great loss that many amateur photographers were unable to view the exhibit of recent date. For, to be quite candid, the pictures as a whole do not cause one particle of the higher feeling or thought of which man is capable. "Rarry and Caddy" and "The Duet" carry us away from the toil of their

Neg. by Wallace C. Babcock, Capital Camera Club, Washington, D. C.

STAR MARY.

creation into a full enjoyment of the thought so beautifully expressed. The remainder of the reproductions are examples of fairly good expressions of tone values and composition, with scarcely a hint of the two highest forms of art, or life, either, for that matter, namely, conception and expression.

It is a poor way to travel toward the highest — this leaving the soul out of things while we attempt to grasp the mechanical part. Those workers who are yet struggling to possess a fair amount of knowledge of the principles of art are apt, as is most natural, to look up to the work of those beyond them in photography as worthy their emulation. They are apt to consider the work exhibited at a salon as of the highest merit, and in striving to produce the same style are sure to forget the beauty of things because so have the successful(?) ones.

Thus is our progress toward the highest in art prolonged. To the man who loves the beautiful things of the universe, of life, of the imagination, these examples of art by photography are a cause for a feeling of profound disgust and discouragement. It is to be deplored that a great many of the strugglers fail to realize the truth of the case, but follow like sheep after the present leaders, dissatisfied with their lead, yet following it, because in their ignorance they suppose it *must be* high art. However, a few are able, at this stage of the game, to hold to their *own* idea of the highest and best in art, though their progress appears at a standstill and the fame of "first prize-winner and salon exhibitor" is not yet attached to their name and does not, therefore, shed everlasting glory on all their future work.

To me, the very highest thing in sight is the only thing worthy of all my endeavors. To be sure there are intermediate steps toward the highest, but why look upon the ground while we take those steps?

It is quite evident that for want of the best art the judges have been willing to accept the *next best,* and to hang it upon the walls of a salon. To interpret "salon" is to put the highest and best as a standard. But this has been forgotten, because not enough of the highest-class pictures were presented to enable the committee to give a presentable exhibit, as far as quantity was concerned. So the second-best class was taken in.

It is quite evident that there is much room for improvement among those august personages above us, and, too, it is evident they are slowly evolving into a higher place. All this should show the struggler that, though the august ones had somewhat of a start over him, yet they, too, were not born great, but had to acquire it by much toil — a thing that is possible for the struggler to do, too. He may arrive there as soon as the successful ones because, though he is learning slowly, he is learning the whole as a whole, while they are learning half, with the other half yet before them.

The same holds good in the many prize competitions. It is no wonder that pictures of a higher class are not oftener forthcoming. If photographic workers (all *students* of art, remember) observe the second-rate work put up as a high-enough standard to receive praise and prize alike, it is naturally to be expected that the second-class standard is the proper thing and the one to attain to; and so no higher ambition is inspired within them, because no higher standard is held to. Again, it is no wonder that a question continually arises among artists as to whether or no photography has any good claim to be considered an art.

The present state of photography is, therefore, a time of drudgery for the worker and also a time when many throw up the work in sheer disgust. The minority are, as always, the coming men, if, as we feel, the highest art is attainable and desirable. The majority always accept first appearances as the real truth, and the judges almost invariably go with the majority.

The mistaken idea is rife that less strife and more personal safety are possible with the majority.

H. Florence Oliver.

GUM-BICHROMATE MADE EASY.

One or two of the articles which have appeared in my after-lunch paper on Thursdays (I need not mention the name of the paper) have given me the idea that the methods laid down for beginners are apparently so very simple that any one who knows nothing of photography absolutely can get a friend to lend him the necessary negative, and in a few hours he can show his friends a gum-bichromate picture full of gradation, with all the minutest details and all chiaroscuro values, or a picture with all the broadest effects which would put to shame the works of a Moss or a — a — an editor of a photographic journal.

When I first commenced the gum process I was foolish enough to lay in a stock of all manners of new *plant,* which only added to extra confusion in the bathroom, the attic, and now and again the back drawing-room if the sun was west; and after P. O. P. toning, etc., I was informed by members of my household I was only adding insult to injury. I heeded not, but stuck at it, and on looking back I can without being in any way presumptuous see many pitfalls for a beginner in some of the articles already written.

The pitfalls are in no way derogatory to the author of the contributions; it is the "what comes next" that puzzles the beginner, as well as the "when shall the next come," and this part is often skipped over, so much like the dear old fifth prop., so easy to read, so easy to grasp, yet close the book, and how many of us have not wondered "what comes next"? With many books on photography open we are often led to wonder "what comes next." Might I then endeavor to simplify the *first* trials for the would-be gum worker in such a manner that, after all, his sister or a friend by borrowing a negative for a little while *can* show a gum result — I won't say picture, that comes later on in another "next."

From your local chemist get 2 ounces of bichromate of potassium and 2 ounces of best Soudan gum. When he has given the latter to you, in a knowing way say, "It *is* the best Soudan, Mr. So-and-So." It looks as if you know something and he might be keeping inferior stuff for *beginners.*

W. S. Sheetz, Capital Camera Club, Washington, D. C.

THE MILL ON THE RACE.

From the oilman get a ½d. packet of lampblack, nothing more, only treat him politely, as his profit is not much in a transaction of this magnitude.

From the stationer get two flat paint brushes, one about one inch wide, the other about two inches wide; get the cheap ones, and as soft as you can. The better ones will do later, say for the next photographic salon; we must in gum-bichromate walk before we run.

The marketings are all complete, and the pocket only a trifle lighter than when you started.

Now you can commence the new process, or as I was encouragingly informed, add insult to injury; but, as in my case, go ahead and never mind.

Put the 2 ounces of bichromate of potassium into one of those 20-ounce dark-green developing bottles, and fill up with cold water, and remember bichromate is sensitive to the light when it dries.

Dissolve the gum in 5 to 6 ounces of cold water, and filter into a bottle through a fine piece of muslin. When the bichromate is all or nearly all dissolved, and the gum strained, you can commence on your first trial, which *should* give you your first print.

Take a clean piece of glass, an old negative with the film off will do, and on the middle of it pour half a teaspoonful of gum solution. Onto the gum put half a teaspoonful of the lampblack. These two must now be mixed into a syrup state, and nothing has ever served me so well as an old chisel, the flat part of the edge grinds the lampblack beautifully. The mixing must be done until there is no grit heard as the chisel works backward and forward on the glass. As soon as the mixture is in a complete syrup state, *without any grit whatever,* pour onto the mixture a teaspoonful of the bichromate solution, and mix this well, and then another teaspoonful, mix this well; by this time the glass will have all it can hold.

Get any bit of white paper, without any shine on it — the note-paper called vellum wove will do — and put it on a piece of blotting-paper larger than the piece you are sensitizing, and with the small brush paint the paper with the mixture. It will at once look a sort of yellow and dark brown. Now take your larger brush and gently go over the paper, taking care to do it lengthwise, and then across. Lines, oh! those lines! will appear as you go one way; turn the paper, and go the other, until the paper looks much lighter, and with the color even, not patchy. This to my mind was the most irritating part of the process; these lines will come, but a gentle jerky movement will take them away, anyhow it can be done easily after one or two trials. Do a few sheets, and put them away to dry where no white light, grit or fluff can get at them. You can now inform your friends you have added insult to injury, and made your own sensitized paper, and the only mess is on the glass. When the paper is *perfectly* dry, put it in the printing-frame as you do with P. O. P., and print for about as long as you would for this latter paper (an actinometer will do later on). Take the paper out of the frame, and put it face downward in your bath or basin with about two inches of water beneath it all round. Then leave it, go out, go anywhere, as the temptation to see what is under that blacky brown stuff is at this point very great, and you will want to assist the pigment off, generally with a sponge; anyhow, leave the paper for some time, say twenty minutes, at the end of which time you may satisfy your curiosity, turn the paper by a corner, and the chances are you will see some of the parts of the positive. Do not begin "splashing it gently," as is so often advised at this stage; put it in again face down, and leave it another twenty minutes, when you will find much more of the result is visible. Now you can just lave it very gently, and you will behold your first result. Dry it, and keep it, and write as I did on the back, "first result" and the date. Make that "first," as far as you are able, your standard for ever afterward step by step. It is your best effort now, it must be your second best next time, and so on.

Let that smudgy little thing, which

it must almost to a certainty be, as you only guessed at the exposure, etc., be as far as you can your actinometer for the second attempt, and let your second attempt be your actinometer for the third, etc., until the time comes when you think you must have that, to me, irksome light-gauge.

Here I must close, and in conclusion I hope that some latitude may be allowed me if the foregoing be read by any old "gum" workers, as, knowing the difficulties for any one commencing this most beautiful process, I have only done my humble best to teach and assist those who are desirous of doing "gum-bichromate" work, and who in commencing their first coating, etc., like a good many others do not know "what comes next" and "when the next comes."—*The Amateur Photographer.* W. W. M. M.

R. Demachy. Courtesy of the *Bulletin du Photo-Club de Paris.*

BRETONNE.

A DEVELOPING BOX.

I send you herewith a drawing of a developing box which I have found to be very useful and thought that it might also be of use to readers of THE PHOTO-BEACON. It is of the greatest advantage to those who use the "factor method" in developing. The box is made light-tight and is large enough to hold largest size developing tray to be used. By using running water the box will rock the tray until the water is again shut off. In using I make note of the time when development of negative will be complete, put the tray in the developing box and go about other work until the time arrives when the negative should be developed, then I take it out, rinse the plate and put it in the hypo. The box entirely does away with the necessity of rocking the trays by hand, which is so tiresome when plates develop slowly. I am at liberty to leave and reënter the darkroom as often as I wish while the developing is going on.

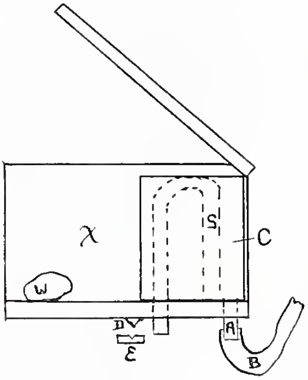


Fig. 1.

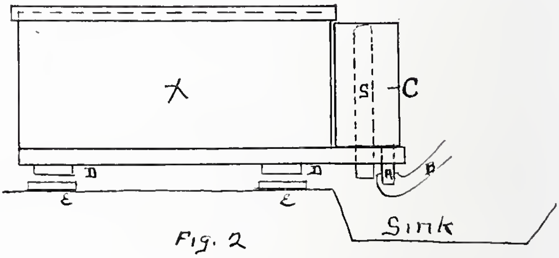


Fig. 2.

DESCRIPTION OF BOX.

The box is made of pine and is large enough to hold my largest tray. For a 4 by 5 camera I would make the inside measure 6 by 9 inches, so that two 4 by 5 trays could be put in at one time. The cover is made to fit down tight, so that no light can enter. Box is painted black outside and in. *C* is a copper box, size 2 by 3 by 4 inches, open at the top. *A* is a ⅛-inch tube entering one corner of box *C* from the bottom. Water enters tube *A* through a rubber tube, *B*. *S* is a rubber tube used as a siphon and arranged as shown in Fig. 1. One end projects through the bottom of the box. When box *C* fills with water the siphon begins to flow and soon empties it. The bore of the siphon should be ¼-inch. *D* is a pivot on which the box rests, so it can tip back and forth. *W* is a weight which can be slid back and forth on the shelf until the proper balance is secured. When box *C* is full, that side of the box is down and *W* is up. When *C* is empty, *W* is down and *C* is up. But as *C* is constantly filling and emptying itself, the box is continually rocking. Of course, running water is necessary for its operation. F. B. HEADLEY.

FROM DAWBARN & WARD, London, we have received copy of a very useful compilation, called "The Figures, Facts and Formulas of Photography," which is a very excellent reference book whose purpose is well defined in the title. It may probably be had from Tennant & Ward, No. 287 Fourth avenue, New York, at the price of 50 cents.

"ART AND PHOTOGRAPHY," is the latest baby to find entrance into the field of photographic journalism. It is published by K. M. Turner, 124 Peach street, Atlanta, Georgia, and its purpose is well outlined in its title. The get-up of the journal is really very good, and reflects credit on both the editor and the printer, and we hope that it will have all the success that its appearance deserves.

PHOTOGRAPHIC REFLECTIONS.

In looking over the photographic reproductions in the January number of THE PHOTO-BEACON, one certainly gets a plenty of food for very serious thought. If these few selections from the Chicago salon are a fair representation of the whole, one may truly ask, what are we coming to? Where are the good photographers?

No wonder our old friend, Stieglitz, has a sad and dejected look of dissatisfaction as he surveys the work which surrounds him. I truly most deeply sympathize with him and wonder what the future salons will be.

F. Michelis. Courtesy of the *Bulletin du Photo-Club de Paris*.

The frontispiece, "Ravvy and Caddy," by Curtis Bell, is quite good and is deserving of praise. "Mrs. Kasebier," by Alvin L. Coburn, page 5, is a conundrum. By its title we are to suppose it to be a woman. By what little we can see it has the appearance of a man. Certainly the pose of the right arm suggests a cigar — the collar and tie are of the masculine design, the face is not suggestive of the weaker sex, the left arm appears somewhat abbreviated — this may be a reality, or it may be caused by the obscureness of the picture. The dark shadow above the head may be an apology for a lady's hat. It is certainly the only thing in the whole picture which in any way suggests the feminine. The whole picture is very poor and looks like an amateur's first work; it is not the kind of work one would pay a photographer for and be proud to give to their friends as a facsimile of the giver.

"The Duet," by J. P. Hodgkins, page 7, makes one think of the Dutchman's oxen. He said they were well matched, one was willing to work and the other was willing it should. There is nothing pretty in the attitude or in the composition.

The pictures on pages 8, 9, 11 and 12 are for illustration and answer their requirements. But what apology has "Autumn," on page 15, by Theodore Eitel, got for being given space in TH PHOTO-BEACON, say nothing of th Chicago salon? It is simply a recor of fact, not a picture. Certainly a bi of corn stubble for foreground, with th trunks of a few trees in the distance fo background does not constitute a picture. Honestly, where is the first b of beauty in the whole thing?

"A Rift in the Clouds," by E. M Blaine, page 17, is quite fair, but ther is too much foreground with no detail in it. He might have given us the heavenly view and left the earthly out altogether.

"On the Road from the Pasture to the Barnyard," page 19, by Edgar A. Cohen, does not thrill one as a masterpiece. It seems to be more a record of fact than a picture.

"Winter Landscape," page 21, by Ralph E. Berger, seems to be rather flat and uninteresting. It would have been better with half the foreground. The sky is leaden and has a misty appearance. Where is the beauty?

"Wastelands" is also waste paper, as far as beauty goes.

But, holy horrors! what would "Rachel" say if she could but behold the terrible vision on page 25? She surely would haunt the perpetrator of the crime the remainder of her life. That large, distended nostril is too conspicuous and too disgusting for public view.

"The Dutch Kitchen," page 27, by Mrs. James E. Bennett, has a far more inviting appearance. This depicts the Dutch dress and manner and answers to the name given to it.

The two pictures on page 29 strike me as being far from good photography. They are too obscure. The fine detail that would have given zest and beauty is not there. "The Alders" might be hemlocks for all we can make out of the pictures. Fuzziness, obscureness and a hazy appearance does not in any way add to the beauty of a picture. Such pictures would not make good lantern slides or enlargements. Why pay large sums for fine lenses? It is certainly not necessary to have a lens at all to produce a great deal of this blurry work now being shown at salons. I have seen better work in pinhole photography. Now, really, Mr. Todd, are not these pictures lacking in real good photographic technic? I think you will have to admit they are or else to say that you have made some very poor reproductions. You perhaps will call this rather sharp criticism. But really, Mr. Todd, I have got the wrong idea of photography altogether or else these reproductions need some sharp dealing with — some sharpening up.

I presume you will not dare to print this strongly expressed criticism of one of your readers, yet I think that if you did it would bring in many hearty amens. JASON D. AMES.

ILLEGAL USE OF PORTRAIT NEGATIVES.

From a decision recently given in the Third Civil Chamber, Paris, it seems that the law is the same in France with regard to the photographer's right of ownership in the negative as it is in this country, also that it is illegal for him to make use of it for any purpose of his own. The case was this: Some time ago a musical society there gave an entertainment, in which two little girls danced in costume. Their parents afterward took them to a photographer and had their portraits taken in their fancy dresses, and, at the time, requested that no copies were to be made except to their order. A little later on they were annoyed to find that the children's portraits were being used for picture post cards, which were commanding a considerable sale. Thereupon the parents instituted legal proceedings against the photographer and claimed damages. The court decided that, although the negative, in accordance with the law on artistic copyright, was the property of the photographer, the model had the right to forbid its reproduction or exposure of prints made from it, and the defendant had to pay 300 francs by way of damages. The reason why the court gave so small a sum as damages was that, as the children were so young, their appearance would be considerably modified before they were adults. Therefore the court considered that no great prejudice had been done them.

Now this case seems to be precisely on "all fours" with that of Pollard versus the Photographic Company, tried in our Court of Chancery in 1888 — the first of its kind in England. In this case the portrait of a lady was used as a Christmas or New Year card.

Here an injunction was granted, with costs, and, if we remember rightly, damages were not asked for. Other cases have since been dealt with here, with similar results. Although no damages were claimed in the above cases, the costs that fell upon the photographers were by no means insignificant, as most would be aware who have had to do with chancery suits. Some little while ago, in one of the inferior courts of Scotland, it was ruled that the photographer had the right of exhibiting portraits of his sitters as specimens. But this ruling was upset on appeal to a Superior Court, and an injunction or "interdict" granted, and the photographer was condemned in the costs. It is satisfactory to learn that the law in France is that the photographer is the owner of the negatives of his sitters, but that he, like his confrères in this country, is prohibited from making use of them without their consent. The same thing, we believe, prevails in the United States.—*British Journal of Photography.*

NEW METHOD OF COLOR PHOTOGRAPHY.

It has been said that there have been more graves dug for the burial of processes of "color photography" than for any other subject, yet, notwithstanding this, it seems probable that the latest method yet devised (by Sanger Sheppard, of England) seems destined to be a step in the right direction and to find favor with a considerable number of photographers.

Briefly, there is no departure from the usual method of three stained films until we come to the superposition; there the process differs, for instead of assembling the three transparent colored films, they are squeegeed consecutively upon a sheet of paper which has been coated with gelatin. The dye leaves the film for the softer gelatin upon the paper, thus giving a colored print upon which are registered the remaining two stained films.

C. Puyo. Courtesy of the *Bulletin du Photo-Club de Paris.*

At first one is inclined to be enthusiastic, but upon reflection it is seen that in no way has the process been simplified; rather, another complication has been added to an already difficult method. Ingenious as the idea undoubtedly is, there is still much to be desired, and we venture to say that "color photography" will never become "popular" until we ultimately reach the point of "one exposure and one print."

ON THE REMOVAL OF DEVELOPER STAINS.

In most text-books of photography "clearing solutions" are described which many of the writers affirm remove the yellow or brown stains caused by a carelessly used developer. These solutions are merely acid solutions containing a hardening agent like alum, which prevents the acid frilling the film. The best of these solutions is probably a three per cent solution of hydrochloric acid, which is applied to the plate after it has been soaked in the formalin bath.

These solutions may be safely relied upon in the majority of cases to lighten the stain, but they will never remove it altogether.

If one needs a more radical cure, as will be necessary in the case of uneven stains, one must adopt much the same process as is applied in "bleaching" fabrics. The two chief bleaching agents of commerce are bleaching powder and sulphurous acid. The former, which is by far the most important, is manufactured by passing chlorin over slaked lime. Bleaching powder is used in acid solution, and bleaches by oxidation, owing to the action of chlorin and hypochlorous acid. Sulphurous acid bleaches by reduction, and its use is limited.

My present object is to bring before photographers the use of these two substances as applied to the removal of developer stains. First, however, it must be said that the nature of such stains on a negative varies very much with the composition of the developer and with the way in which the stains themselves have been formed.

One thing is certain; it is always better and quite easy to take precautions against getting any developer stains on one's negatives. Plenty of a soluble sulphite should be used in the developer itself, and after development the plate should be washed at first in a solution of sodium sulphite, or directly fixed in the bisulphite hypo bath — the "acid" bath. When the time comes for drying the negative, it should be put up to dry in some place where there is no chance of it being splashed with injurious solutions. Still, owing to an occasional lapse into careless ways, one may get every now and then an unevenly stained negative.

Then, the first process which should be gone through is to harden the film of the negative in the formalin hardening bath. It can after that be treated with

Sodium sulphite	35 grains
Sulphuric acid (concentrated)	12 minims
Water	1 ounce

This solution does not injure the silver image or the gelatin film in any way. It will entirely remove a few stains, especially if applied before the stain has time to dry in thoroughly, and will lighten the color even of those produced by hydroquinone to a considerable extent. But, as a rule, it will be found that such a solution as

Bleaching powder	30 grains
Concentrated hydrochloric acid	40 minims
Water to	5 ounces

is necessary for complete stain elimination.

It is important when making up the bleaching powder solution to see that no particles are left undissolved. I always dissolve the bleaching powder first in the water, and, after stirring it about *filter;* then I add the acid. I believe that the above solution is able to bleach out entirely any stain which could possibly be formed by any developer, if sufficient time be given. It will bleach the stain images produced by pyro and hydroquinone due to too little sulphite.

The weak point is, of course, that it attacks the silver image, forming silver chlorid, and on account of this property I have found it a very excellent solution for indirect sulphuretting purposes. The obvious way of dealing with the bleached negative when it has been quite freed from stain is to redevelop the image with any suitable developer, which, since the image is of silver chlorid, must not contain much sulphite. Great care must be taken to wash the negative very thoroughly between the bleaching powder solution and development, as otherwise, when using a phenolic developer, a brown stain is produced all over the negative, owing to the oxidation of the phenol by the last traces of the bleaching solution. However, this method unfortunately restores most stains to some extent. Ferrous oxalate appears to do so least. It is better to treat the plate with a sulphuretting agent, such as a solution of sodium sulphid or sulphuretted hydrogen; of course, washing between the bleaching and the sulphuretting solutions. But even this method appears to restore some kinds of stains to a small extent. Perhaps, without blackening, the negative could be backed with black paper and then photographed; or if it had been very considerably intensified with silver (mind, silver — not mercury) before the application of the bleaching powder bath, it might be printed from as it is, that is, with a silver chlorid image, but I have not tried experiments on these lines.

Very similar to the acid bleaching powder solution are solutions of chlorin and bromin, or an acidified solution of a hypobromite, but iodin solution is not so efficient as a bleaching solution for stains as the above.

Alkaline hypochlorite and hypobromite solutions will bleach a stain completely if allowed to act for sufficient time. When the stain is of such a nature as to be bleached quickly, these solutions can be so mixed as not to attack the silver image to any appreciable extent. The slight amount of silver chlorid or bromid formed (that is, if any at all is formed) can be removed by hypo solution without any restoration of the stain. The following is the best solution of the kind I have tried:

Bleaching powder	47 grains
Caustic soda	8 grains
Water to	9 ounces

The solution is stirred till all the soda has dissolved, and then filtered. This bath should not be kept long, at all events when exposed to the carbon dioxid of the air. When the exposure of a negative to such a solution has to be prolonged, the solution itself should be changed about every half hour or forty minutes. But when the action of the alkaline bath on the stain is slow, one may as well use the acid bath, as prolonged exposure to the alkaline bath causes the image to be very considerably, if not entirely, chlorinated. The action goes on to a greater extent when the amount of alkali in the bath is lessened, as happens when carbonic acid is absorbed from the air. The advantages of the acid bath, when we can not help chlorination, are that it does not apparently harm the film, and it is rather more powerful in its bleaching properties.

It is a most unfortunate fact that these alkaline hypochlorite and hypobromite solutions affect the gelatin film

F. Michelis. Courtesy of the *Bulletin du Photo-Club de Paris.*

most objectionably, causing frilling of an extreme character, and if too strong dissolving it altogether. The solution above given has these faults, I believe, in a minimum degree.

Alkaline hypochlorite and hypobromite solutions have a pleasant seaweed-like smell. This is due to free hypobromous or hypochlorous acid, which is formed by hydrolysis even in presence of large excess of alkali, and is really the active part of the solution.

Summing up, I may say I believe that all developer stains can be bleached out by the use of an acid or alkaline bleaching powder solution, although it may not always be possible entirely to prevent the recrudescence of the trouble when the negative has to be reblackened, owing to the image having been chlorinated.

I give, in conclusion, a list of the commonest stains on negatives, their causes, and the remedies for them:

NATURE OF STAIN.	CAUSES OF STAIN.	REMEDIES.
Oxidized developer stains.	Carelessness in various ways on part of the operator — using too little sulphite in the developer, or not taking enough care in subsequent operations.	Various hypochlorite and hypobromite solutions alkaline and acid. Solutions of chlorin, bromin, or less valuable iodin. More rarely sulphurous acid. Bleaching powder is the most convenient source of hypochlorite solutions.
Silver stains.	Bad plates. Printing from bad P. O. P. Using an unsuitable developer. Putting negatives of certain brands developed with hydroquinone into fixing without sufficient washing.	Density reducing solutions, as Howard Farmer's. The stain can only be removed if it is near the surface of the film.
Brown stains in mercurial intensification.	Precipitation of $CO_2 4HgO$ from washing a film containing mercuric chlorid in tap water. The mercuric chlorid solution should always contain about one per cent of hydrochloric acid, and the first two wash waters after the mercury bath should consist of half to one per cent hydrochloric acid.	A two per cent solution of hydrochloric acid. Remember that $HgCl_2$ solution hardens the gelatin film, so that acid of this strength is quite safe to use.
Yellow ferrous oxalate stains.	Precipitation of iron-stained calcium oxalate brought about by washing too soon in tap water unacidified.	These stains can be prevented by washing in half per cent acetic acid at first. If the stains, however, are once formed a stronger acid solution is necessary. In this case first harden the film with formalin and then treat with three per cent hydrochloric acid.
Sulphur stains.	Those appearing after the negative has been dried and put away are due to incomplete fixing or washing, or both. If the fixing has not been complete the stain deposit will probably contain silver sulphide. An immediate deposition of sulphur is caused by putting a plate whose film contains "hypo" into an alum or acid solution.	When these stains are produced only by sulphur they can be removed, I find, by alkaline sulphides. The alkaline sulphides dissolve the sulphur forming polysulphides. If during this treatment any part of the silver image gets converted into Ag S, the whole of the image can afterward be chlorinated with the bleach solution and then redeveloped, or the whole sulphuretted.

— *Photography.*

R. E. BLAKE-SMITH.

DISTORTION IN PAPER PRINTS.

Many photographers do not seem to be aware that considerable distortion may exist in a paper print that is not present in the negative from which it was made. The fact that such distortion does, at times, exist, often leads to the rejection of portraits which, but for that, would be considered satisfactory. The distortion arises from the expansion of the paper when it is wetted, and that expansion is greater in one direction than it is in the other. If, for example, say an albumen print is trimmed prior to toning, and it be mounted while it is wet, it will be found, if the glass shape by which it was trimmed be laid over it when it is dry, that the print is somewhat larger than the glass, and larger, proportionately, in one direction than it is in the other. All photographic papers are machine-made, and it is a property in such papers that they expand more in the transverse direction of the web than they do in the longitudinal direction.

Then, again, as paper is very elastic while wet, it may be and often is stretched out by the mounter in getting the print into a neat and even position on the mount. This distortion may, to a great extent, be avoided by trimming and mounting the pictures after they have been dried, and using a mountant that does not contain much water. Although the paper is in an expanded state while wet, it gains very much its original dimensions when it is again dried. The unequal expansion of paper may at times be turned to advantage by portraitists, to flatter their sitters, when the prints are mounted wet. For example, in the case of a thin and long face, if the paper be cut lengthwise of the web, the greater expansion will be in the other direction, and the features will, consequently, be somewhat broader; while, if it were cut the other way, they would be somewhat narrower than in the negative.

WEIGHTS AND MEASURES AND THE METRIC SYSTEM.

It is a very puzzling proposition not only for beginners but also for advanced amateurs, and especially for those that indulge in scientific research, to transpose formulas written in the English or metrical notation into our own complex system of weights and measures. The confusion is still enhanced by the lack of method shown by the dry-plate makers in general, and some technical writers as well, who formulate by avoirdupois weights or apothecary's weights, or still (especially on the continent) by parts, and very often fail altogether to enlighten the reader's mind as to the particular system they are making use of. In a series of articles published some time ago in this paper, I called the attention of the beginner to this point, and advised him when compounding a formula to ascertain as far as possible the author's intention before going ahead with the solution. Since that time, in the hope of bringing some light on the question and helping a good many amateurs out of their troubles, I wrote to all the platemakers of this country for information on the following points:

1. Whether avoirdupois weights (437.5 grains to the ounce and 16 ounces to the pound) were intended in their formulæ.

2. Whether the amount of water prescribed was to be understood as representing the total bulk of the solution, all chemicals included (which, by the way, is the only correct system of formulating, except when formulating by parts), or whether it merely represented the volume of water to which the other chemicals should be added.

3. Whether they advocated the preparation of the alkaline solution by hydrometer test rather than by weight.

Most of them answered me most courteously, and I am indebted to them for being able to make an authoritative statement on the foregoing points which will go far to remove a great deal of trouble from the path of the beginner. I give here in a tabulated form the answers:

To Question No. 1.

Cramer Seed	Formulate by apothecary's weights of 480 grains to the ounce.
Eastman Forbes Hammer Rochester (R. O. C) Standard	Formulate by avoirdupois weights of 437.5 grains to the ounce, and 16 ounces to the pound.

To Question No. 2.

Cramer Eastman Forbes Hammer Rochester (R. O. C.) Seed Standard	The amount of water given represents the actual volume of water to which other chemicals are added afterward.

To Question No. 3.

Cramer Hammer Rochester (R. O. C.) Seed	Advise the use of hydrometer in preference to weight.
Standard	Advise the use of hydrometer in preference to weight, but cautions against inaccurate instruments.
Eastman Forbes	Prefer the use of hydrometer whenever there is any doubt as to the strength of the chemicals employed. When C. P. alkalis are used weights are perfectly accurate.

So much for plate manufacturers.

These statements cover, however, but part of the question. What about the translation of English into American weights and measures, and what about the standard legal weights and measures of our own country? Mr. Cramer, over the signature of Mr. Benecke, and as a postscript to his letter already mentioned above, adds:

"All this confusion could be avoided if we would follow the example set by other civilized nations and adopt the metric system."

Now it will come as a shock to many to learn that the only legal standard system of weights and measures in the United States is this very metric system. Having written to the National Bureau of Standards in Washington to settle the matter once for all, I give the readers of the PHOTO-BEACON the benefit of the answer I received from there, which will prove interesting and instructive to every one. I must add beforehand that I have not received at the time of the present writing the tables and bulletin mentioned in the following letter, but they will be published in the PHOTO-BEACON as soon as received.

WASHINGTON, December 19, 1902.

Mr. A. K. Boursault —

DEAR SIR,— In reply to yours of the 15th instant I have to state that all of the information asked for by you is not contained in any of our publications, but quite a good deal of it is contained in some of them. In regard to the customary weights and measures in use in England and the United States, the weights and the length measures agree with one another; the capacity measures, however, differ considerably. The United States gallon is defined as the volume of 231 cubic inches of water. This quantity of water weighs approximately 8.3 lbs. The British gallon, on the other hand, is defined as the volume of 10 lbs. of water at 62° Fahr., weighed in air against brass weights, the air being at 62° Fahr. and the barometer standing at 30 inches.

In regard to the legal standards of weights and measures in the United States, the metric system is the only system that has ever been adopted by Congress. The customary system was inherited, with some slight modifications, from our English ancestry, but has never been adopted by any specific act of Congress. However, when the metric system was adopted certain of the units were defined in terms of the yard, pound, gallon, etc., and a copy of the table based upon these legal equivalents will be sent to you under a separate cover.

We have no table giving the values of the United States weights and measures in terms of the English, but you can secure a table giving the relation between the English weights and measures and the various units of the metric system, by writing to the Standards Department, Board of Trade, London, England. You will then have both the United States customary weights and measures and the English weights and measures in terms of metric units; and it will be an easy matter for you to get the relation between them if you desire to.

In reply to your question as to whether it was a matter of custom that formulæ should be made up in apothecary or troy weights, I have to state that there is no law whatever bearing upon this point — any one is free to express their formulæ in whatever system is agreeable to those concerned.

In addition to the conversion table referred to above, a copy of Bulletin No. 26, on the fundamental standards of the United States, and a copy of Appendix 18, Report for 1890, giving a history of the metric standards, will be forwarded to you.*

Respectfully,
S. W. STRATTON,
Director, L. A. B.

In conclusion, one point is evident. It is now up to the dry-plate makers to adopt the metric standard, the only one which will not lead to endless confusion. As this can not be accomplished at once, however, and as many photographers have no other weights or measures at hand but those in present use, let formulæ be given in both the metric and the old English system until such time as education and the slow but sure progress of evolution will have shelved once for all that medieval remnant of past centuries which has long been abandoned by the scientific world of every civilized part of the globe. This simple adjunction will at once make way with the difficulties now in the path of the progressive scientific photographer and save a lot of time, trouble, mistakes and patience to all concerned. A. K. BOURSAULT.

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*[The documents referred to came to hand in a few days. The data they present have been frequently published and need not be repeated here. One point, however, is interesting; the Imperial and U. S. fluid ounces are not the same, as is popularly supposed. As a matter of fact, the former contains 1.73 cubic inches, the latter 1.80 cubic inches.— ED.]

FIFTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

The Fifth International Congress of Applied Chemistry will begin its session in Berlin on May 31, 1903. This meeting will be the most important function of the kind ever held, and includes all departments of applied chemistry.

Special committees and sub-committees have been arranged for all countries. The general chairman of the American committee is Dr. H. W. Wiley, Chief of the Bureau of Chemistry of the United States Government.

Photochemistry is represented by Section IX, and it is hoped that all Americans interested in photochemistry will become members of this fifth congress. The fee for membership for Americans is $4.85. Members will receive the full printed reports of the proceedings and all the papers read during the session. This publication in itself will be a very important one.

All American photochemists are requested to present papers on photochemical subjects. If they can not go to Berlin themselves, these papers will be read by Dr. Leo Baekeland, who is chairman of the section on photochemistry.

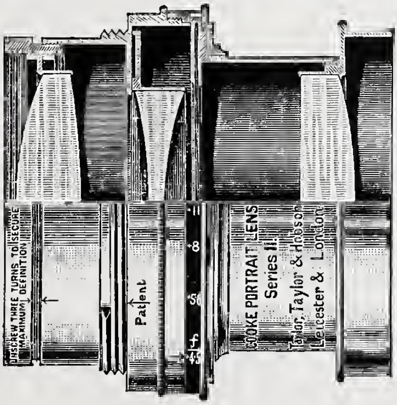
All correspondence on this subject or applications for membership can be addressed to Dr. Leo Baekeland, "Snug Rock," Yonkers, New York.

EDITORIAL TABLE.

From the MacMillan Company, 66 Fifth avenue, New York, we have received a copy of a new edition of Vogel's Practical Pocket-book of Photography, edited by E. C. Conrad, F.C.S. This is a new edition of a well-known standard book in the art, but it is not simply a reprint from old plates but is apparently practically rewritten and brought up to date, and will be found a very compact, complete and handy guide to photographers. It is published at the price of $1.

The Blair Camera Company, Rochester, New York, are first in the field with their catalogue for 1903, which, as in former years, gives very explicit information regarding the instruments manufactured by the firm. We notice in new features that the No. 3 special folding and the No. 4 folding Weno Hawk-eyes may now be had with long bellows and extension bed, which features permit focusing with rack and pinion and allow the use of extra R. R. lens of long focus, and also allow the instrument to be fitted with any of the leading high-grade lenses regardless of the length of focus.

Taylor, Taylor & Hobson, St. James building, New York, have just issued an interesting booklet in which is described Series 2 of their renowned Cooke lens, this particular instrument being intended especially for portrait subjects and works at the large aperture f-4.5. By a unique arrangement of the back combination of the lens the photographer may secure at will either uniform sharp definition or any desired softness evenly throughout the plate. How this is attained will be made clear on reference to the cut.



We have just at hand the two latest books of Dr. Jos. Maria Eder, the well-known scientist and photographic expert of Vienna, on "Praxis der Photographie" and "Grundlage der Photographie mit Gelatine Emulsionen." They are a reprint vastly enlarged and put up to date, of the first edition of his great work on photography which is *the* standard work of that science. His "Ausfuhrliches Handbuch der Photographie" comprises no less than fifteen volumes and embraces all subjects pertaining to photography, which are treated separately and in the most thorough manner. The two volumes we are speaking of are unfortunately not translated, but they are invaluable to the advanced student, the scientist and to the platemakers, who ought to study them thoroughly. The wealth of information contained in them is so great that it is practically impossible in so short a space to give even a succinct idea of what they contain. The composition of the gelatin emulsion, the property of the several silver salts separately or in mixture, the different reactions of the developing salts, alkalis, bromids, etc., are given a very complete treatment, embracing several chapters. The action of light is taken up afterward, and most interesting chapters are devoted to the sensitometry of the photographic plate. The practical part, however, is not neglected, and full information is given on the manufacture of the dry plate, both on a small and large scale; on the treatment of the dry plate in the studio, a special chapter being devoted to orthochromatic photography, to enlarged negatives, etc. Negative papers are also considered, the subject being entered into in a most exhaustive manner. For those who wish to keep abreast with the advance and progress of our beloved science, no better investment could be suggested than to purchase those two books, which can be imported by any reliable bookstore. They are published in Germany by Halle a. S. Verlag von Wilhelm Knapp, 1902-1903.

IT IS but a few years since gaslight papers have been introduced in the photographic world, and while they met at the beginning with prompt recognition by the amateur, it was but very lately that they have found their way into the professional studio. It must be confessed that at the beginning they did not compare favorably either with the regular bromid paper in use at that time, neither with the platinum paper. Their defect was mostly a lack of gradation, want of depth in the shadows and a general grayish appearance which was nothing less than pictorial. How matters have changed since then we may judge by the samples of Cyko paper which we had occasion to examine recently. They yielded, under proper treatment and with but little care, prints almost indistinguishable from platinum or from the best grade of bromid paper sold on the market. The fine details were beautifully preserved, and the modulation in the half-tones was perfect. If we take in account besides, that these papers are made to suit any kind of a negative, from the thinnest and flattest to the one which overdevelopment has made particularly unprintable, it will be readily seen what a flexible as well as powerful medium of expression these papers are in the hands of either amateur or professional. Without going into details about each kind of those papers, we wish, however, to mention one grade of them, made in medium weight and on a beautifully grained paper called "Art Cyko," which in our hands has given us beautiful results for both landscape and portrait work of a pictorial nature. We think its use should be seriously recommended to the enterprising worker, as he will get by its aid most admirable results. The treatment of these papers does not offer any particular difficulty. They print quickly and they are developed the same as any other gaslight paper, a metol hydrochinone or a rodinal developer having proved most reliable in our hands. We are glad to signal these papers to the numerous class of amateurs and professionals who wish the best and the most artistic results, and some new up-to-date effects to show to their friends or to put in their show windows. A. K. B.

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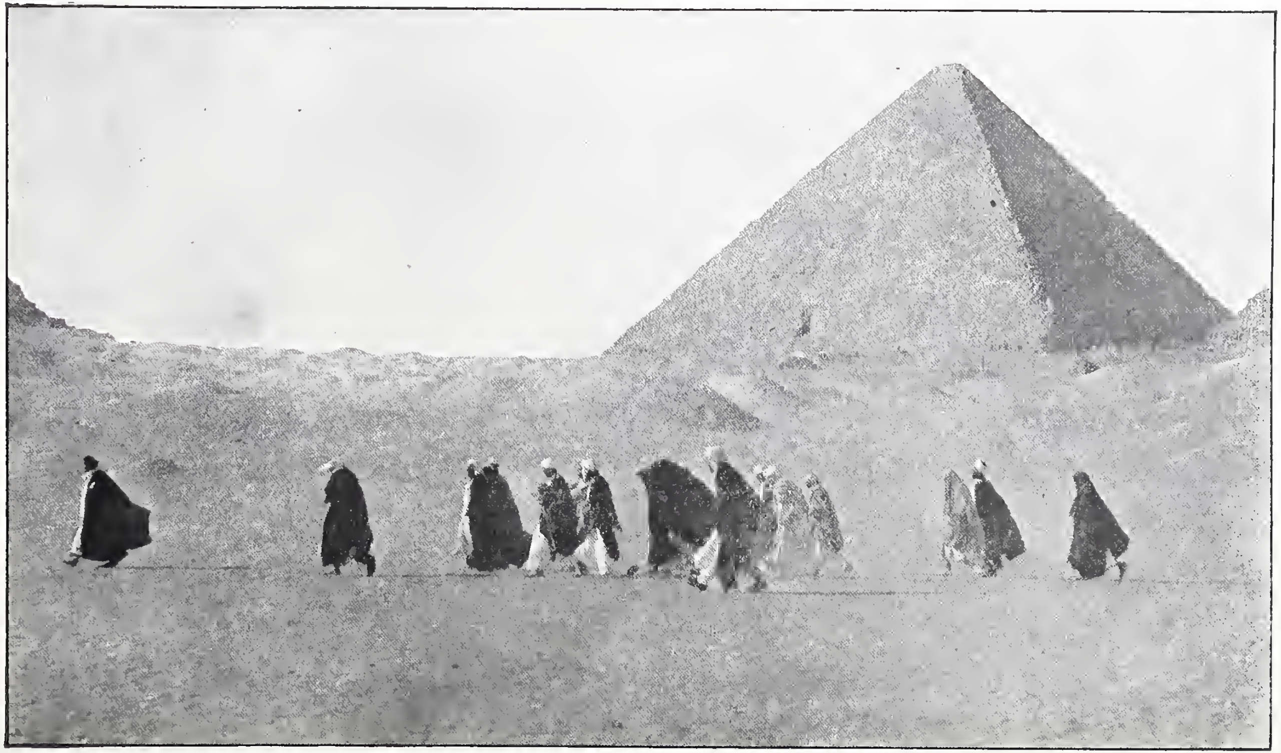

Prize-winner, Kodak Progress Competition.

AN ARAB FUNERAL.

Miss C. Pendleton.

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SELF-REALIZATION.

On another page my readers will find a communication from the secretary of the national association which will prove interesting reading, not only to the professional photographer, to whom it is addressed, but to all who are interested in the art. In reading it through I was rather struck with the part where he refers to the question of prizes in connection with such conventions, more particularly where he says, "How many of our past prize-winners are to-day financially well to do?" In other words, my interpretation of the idea he desires to express is this: What standing do past prize-winners have with the general public, and more important still, with their fellow craftsmen, and above all, what is their success in realizing the best that is in them. The two former points are to me the least important; the third, that of self-realization, overshadows all others, and I was therefore led to inquire, "What has become of the most noted prize-winners of the past dozen years?" Are they resting upon their laurels? That is to say, had they realized all the ideals that were in their mind, or had they evolved new ones on a higher plane that they were now endeavoring to materialize?

This struck me as being a rather interesting point, because of later years I have become almost a convert to the "saturation" idea, that is to say, I have been tempted to apply certain physical facts to the world of mind. We all know that given a certain quantity of water and a particular chemical, this amount of water will dissolve only a certain amount of the substance, and beyond that, nothing, because it has become saturated; just as a sponge will absorb a certain maximum amount of a fluid and no more. I am beginning to suspect that our minds are very similar in their powers of absorption, and that sooner or later they reach the saturation point, which is possibly determined by the ideal that governs the assimilation process.

Let me try to apply my theory to this matter of prizes. Out of curiosity's sake I have looked up the grand prize-winners at the national convention for a dozen years — being all those to which I have access. Undoubtedly these men worked for the prizes. Their ideal was to secure the possession of a gold medal, and the fact that they won out is proof that they possessed ability and that their then ideals were realized. I have not the least bit of doubt that their actual objective, when they worked for these medals, was the conversion of their award into dollars and cents, through the enhanced demand for their work, due to the label affixed to them by their fellow craftsmen. All in all, it must be admitted that these past grand prize-winners are financial successes, though there are many others just as prosperous who have never scored in these contests, and so this point does not count for so much after all.

But I am trying to look at the whole problem from a different view point, namely, that of self-realization. This is the hard problem. All of us have ideals that we can not realize because of our environment. We are the victims of conditions. The point is very tersely put by a reply of a preacher, who said that he would be delighted to preach doctrine very different from what he usually gave his congregation, but he had six good reasons for not doing it, namely, himself, his wife and four children; and in the same way the majority of photographers are unable to realize their pictorial aspirations because their customers do not want the kind of picture the photographer would prefer to make. Any man who can set his ideal very high and who can come within a measurable length of attaining it, is emphatically a king among his fellows, and, on looking through the list of past grand prize-winners, it seems to me that only one of them has not yet reached the saturation point. Only one of them has an ideal beyond dollars and cents. Only one of them is ambitious to express the best that is in him, who has been willing to educate his customers for the sake of realizing his ideal and to make the dollar standard subordinate, and that man is Pirie MacDonald.

Twice a year it is my fortune to see Mr. MacDonald in his own studio, and in one hour I get more refreshing draughts, mental aspirations and inspirations under his skylight than I get anywhere else in the course of a year. Every few months he seems to realize a former ideal, but its place is at once taken by one that is higher and grander and once more he is in pursuit of this. His mind never seems to reach the saturation point, and so, month by month, his mind keeps on growing and evolving on to a higher plane. When medals constituted his ideal, he worked for medals and got them, and his is the only name that occurs three times on the roll of the national convention as a grand prize-winner. Now that he is working to express Pirie MacDonald, medals are so tawdry that I am convinced he would not stoop to pick one up from the floor.

This is the true spirit that must influence the photographer if he desires to belong to a profession. The man who works simply for dollars is a business man, and nothing more. If he wants to feel that he belongs to a profession he must be prepared to suppress, when necessary, the desire for dollars in order to advance, not only his calling, but humanity as well. It is this conception, perhaps too vaguely stated, that now influences the officers of our national association and has done so since 1901, and it is the duty of every photographer to aid them in their struggle to secure for photography a proper status. It seems to me the readiest means at the hands of every photographer to help in attaining this ideal, is for him to make a dozen pictures, not for dollars, but in order to express the very best conception he has of what portraiture ought to be, and to bring them to the meeting and place them on the convention walls where they may be seen by others and where he can compare his ideal with that of his fellow craftsmen.

F. DUNDAS TODD.

THE Quarter Century Photographic Competition which is being conducted by the Bausch & Lomb Optical Co., and which closes October 1, next, is attracting unusual attention among American photographers, from the fact that it is the only competition in recent times in which the merits of American photographic lenses have been tested, and it will be an extremely interesting epoch in the development of American photography, as showing the results of the last quarter century's work in an industry which has, heretofore, been essentially European. Judging from the exhibits which have already been handed in, although the competition is not to close for eight months yet, there will be no cause for the users of American lenses to regret their choice.

BY A misprint in the February issue the Agfa "Handbook on Developers" was said to contain eight pages of information, when the facts of the case are that the book contains forty-eight pages of good, wholesome instruction.

COMPETITION No. 58.

The lantern-slide competition is never a popular one, and this month's is no exception to the general rule. I must confess that I am rather disappointed that so few readers enter for this contest, and I hope that in another year I will have no cause for complaint on this score.

The lantern-slides are made to be viewed in a lantern and therefore I submitted the competing slides to the Chicago Society of Amateur Photographers with the request that the lantern-slide committee make the awards. They report the following as being the prize-takers:

First prize — F. R. Lockhart, 100 Augusta avenue, Toronto, Canada.

Second prize — Gust. Horlin, 5127 Wentworth avenue, Chicago.

Third prize — E. Williams, Zion City, Illinois.

Prize-winner, Kodak Progress Competition. William C. Motteram.

WET PAVEMENTS.

The subject of the first prize picture was awarded second prize in the Genre competition last year, and was reproduced in the September number.

FUTURE COMPETITIONS.

Competition No. 60 — Waterscapes. Closes April 30.

Competition No. 61 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 62 — Domestic animals. Closes June 30.

Competition No. 63 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 64 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

SOME STARTLING FACTS ABOUT EXPOSURE.

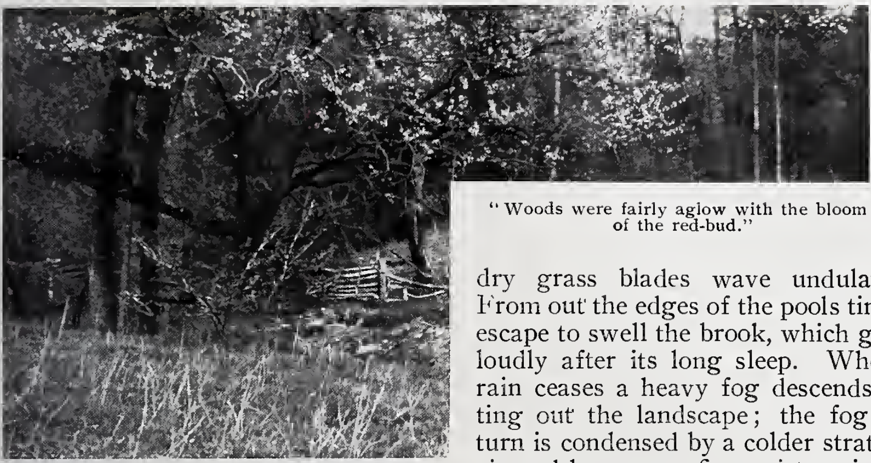
In these days of fast exposures, it may not be out of place to consider for a moment just how much light strikes or impinges upon the surface of the photographic plate during the brief periods of time which are variously spoken of as "instantaneous," "twinkling of an eye," "quick as a flash," etc.

When a plate is exposed to a beam of light in a camera for the one-thousandth of a second there has flowed in upon it a beam of light just 185 miles in length; for the two-hundredth of a second, the beam is 925 miles in length; for the one hundredth of a second, 1,850 miles; fiftieth of a second, 3,700 miles; twenty-fifth of a second, 7,400 miles; tenth of a second, 18,500 miles, while if it were possible to give an exposure as brief as twenty-thousandth of a second a beam of light of exactly nine miles long would fall upon the photographic plate.

R. James Wallace.

Don't miss the practical articles on how to make and do things now appearing in the *Home Bazaar.* 50 cents a year.

"Pussy-willows' gray eyes."



" Woods were fairly aglow with the bloom of the red-bud."

DAYS FROM A CALENDAR OF SPRING.

On a warm day in January a steady drip, drip, sounding through the otherwise quiet woods, called for an investigation. We found a maple tree, in which the sap had already mounted, bleeding from wounds among its upper branches. On the south — the sun-kissed — side of the trunk, an incision through the bark elicited a quick succession of pearly drops; the temperature on the north side was below freezing and the wood hard and dry.

A sequence of warm days, such is the early march of spring. In January a few, in February more; the first come only at long intervals, breathing spaces, wherein we may rest from our combat with cold winter. But spring's near approach is erst heralded by the last two weeks in February, when warm days are of recurring frequency, and are apt to be followed by days of rain, rain which melts snow. Then is the country indeed drear. The trees stand bare-limbed and gaunt, against a sky of sullen gray. The forest floor is littered with black branches, an aftermath reaped by the wind, when his first feast of autumn leaves had been whirled away. Now a vagrant gust shakes the wet boughs, and loosens a shower of drops which fall with a shivering swish. Where an open space or depression occurs, the turf is engulfed by shallow pools of snow and rainwater in which dry grass blades wave undulatingly. From out the edges of the pools tiny rills escape to swell the brook, which gurgles loudly after its long sleep. When the rain ceases a heavy fog descends, blotting out the landscape; the fog in its turn is condensed by a colder stratum of air and becomes a fine, misty rain.

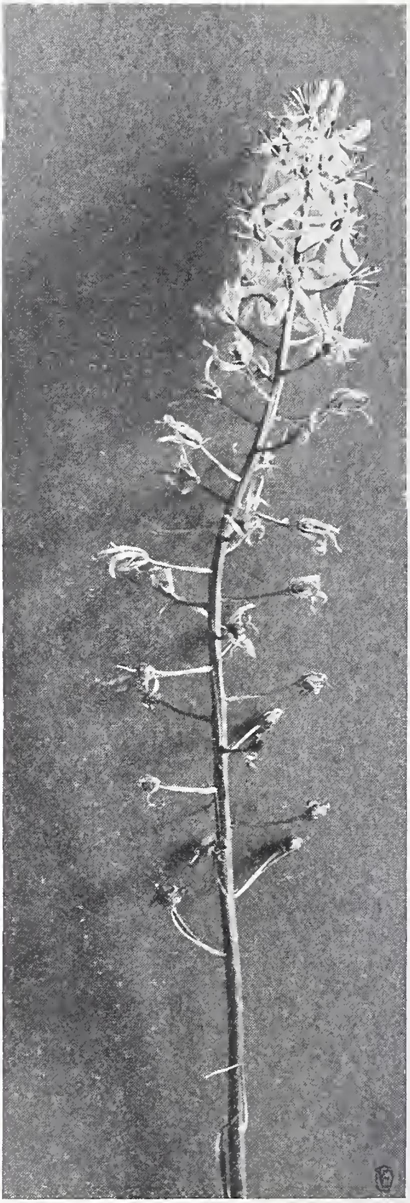
Truly a dispiriting season. Yet through it all there runs a note of promise, a sense of change which cheers us; we hope, we feel, we know, that it is

" The coming of the first leaves."

the presaging of the new life to come; even though when at the close of a sunny day the cold again descends, and morning wakes to find the brook's overflow gripped hard in the icy hand of frost, we are not disheartened, for we know that winter's spell is broken. The snow may mantle the ground, and the mercury fall low in its tube at night, yet is spring coming, coming.

In this anticipating is the real charm of the cycle of the seasons, which makes them ever new; definitely when each one will begin, or the other leave off, we know not; there is broad scope for our hopes and wishes, and the degree in which these are gratified, or disappointed, in that degree are we correspondingly elated or depressed. The birth of every season is thus as novel as if it had never been experienced before; we delight in observations and comments on its arrival, be it premature, timely, or tardy.

By February middle the buds of the pussy-willow had burst open their scales and were peeping out into the world with soft gray eyes. It was a cheerless scene which then greeted their vision, and mayhap, too, they regretted later the rash boldness which induced them in those few warm days to discard their winter wraps — comfort though they received from their kinsman, the sturdy common willow — *Salix discolor* the botanists call him — whose branches were all showing yellow. The blood of the new year had reached his twigs; this is a sure sign of spring. In these later weeks, he and his kind afford the brightest color note of the season — a golden yellow — which clothes all but the stocky trunk. They look so warm and cosy in their snug retreats in the low valleys, where small streams take their way. On days when the sunshine is weak and insipid, they multiply its strength a hundredfold by reflection from their golden-hued branches.


"The stately wild hyacinth"

The skunk cabbages are the first of true plant life to hear the call. The tiny spearpoints of their hooded spathes are pushing up at every water's edge in the swamp. The frost nips them, sometimes bites black a big piece of their purple mottled tops. But they are not discouraged; every sunny hour is to them clear gain. At last there comes a day, a succession of days, in middle March, perhaps, when the south wind, the sun and clear skies unite to make the weather mellow, warm and dry. The last snow patches fade from the hillside, and long tree shadows lie lovingly on the bared, brown earth. Then the skunk cabbages rejoice; they open widely their hoods and early awakened flies buzz busily about them, proud of the early feast of pollen they have discovered. If you meet these sturdy ones in your early rambles, do them honor, let not their repulsive name lead you to shun them, for they are kin to the lordly lily, and the bravest of the brave. The offensive odor which gives them a name is only noticeable when a stem or spathe is broken. Look upon the earth about them for last year's seeds, black three-cornered things, and, if the species is becoming scarce in the neighborhood, put a few seeds in your pocket to drop in the next swampy pool you meet with on your walk; this is the act of a true nature lover.

Soon the days no longer alternate warm and cold, but vary sunshine and rain. 'Tis young April now, and the sky is overcast by gossamer clouds just thick enough to make misty the light of the sun, whose rays, however, break through often enough to dispel any sense of grayness in the landscape. The trees almost all show life signs, some are in bud, the horsechestnut and the ash; others are in full bloom, notably the swamp maple and the pussy-willow. There are few things so beautiful as this blooming and leaf unfolding of the trees. Though their blossoms proper are in most cases small, and in themselves insignificant things, depending on the wind for the distribution of their pollen, yet they are so multitudinous that they clothe the tree in a garment of the softest yellow and red sheen. Especially noticeable on the sky-line of the forest is the delicate lacelike effect of the bursted buds of these early bloomers, for they hide the gaunt winter bareness of the limbs in a misty veil. Nor is there ever a more delightful phenomenon to observe than the coming of the first leaves on any of the forest trees. The woods take on a dash of green spray which pleases infinitely; the searcher for the early wild flowers should look up occasionally, he will be compensated.

On this still, cloudy afternoon the lowlying meadow slope is literally peo-

" They vary, sunshine and rain."

pled by robins. Almost every square foot is possessed for the time by a bird, worm-hunting, and, as I approach, each brown back is perfectly still, but heads are up and eyes alert. They all hope to escape notice, but when their eyes meet mine, and their owners know I have discovered them, away they go flying low. In the brook a dozen are busy bathing. They take it seriously, making heroic dips into the deep pools, but revel later in the shallows. Anon they chase each other; the swish of their wings is plainly heard in the peaceful quiet of the hour.

The first round tree shadows of the year are formed by the thick-hung catkins of the willow, and lie with inviting softness on the velvet green of the grass tempting one to recline in their embrace. But the air is yet fresh, and the earth still holds that pregnant coolness which gives to the plant first-comers a green luxuriousness not to be rivaled by a later season. Besides we are not yet wearied of the magic of the spring sunshine, from a sun which hangs in a sky of azure blue. Later in the day snowy cumulus pile up, and the empyrean vault is filled with a billowy mass of white. In the forest nooks now blow serenely the advance guard of the flower army, nodding their tender blossom heads to every pulsing breeze. Hepatica! bloodroot! twinleaf! synonyms for such freshness as the florist's hothouse hybrids never knew; may good weather and fair skies ever betide you!

As the noon of a hot May day draws nigh, a June-like aspect pervades the scene, and one may even detect August in the odor which comes from last year's dried leaves and plant stalks, as the sun heats them. But the prevailing scent is that of the fresh turned earth in the farmer's field, a wholesome odor, imbued with the breath of new existence, of vigor unrestrained. It is a time when mother earth teems with bristling spearpoints, which soon lose their warlike appearance, and unfold in fronds of leaf and flower. The tide of life mounts ever higher, with the increasing warmth, until at last we have the forest and meadow fully clad in their rich new robes of green.

A few days ago the woods were fairly aglow with the bloom of the red bud and trilliums dappled the floor of the woods. Now they are gone and the larkspur's blue spikes are seen in their place, while great clumps of wild geraniums flaunt the hillsides, and in sheltered corners the stately head of the wild hyacinth may be found. This later march of the flowers is so rapid that it may be likened to a procession which has been passing in double rank, and now, suddenly at the command of warm air and continued sunshine, forms eight, then twelve, abreast, and hurries on. Spiderwort, dandelion, gill-over-the-ground, marsh marigold, Virginia cowslip, violets of sorts, ragweed and dentarium slip by. Of them all only the lordly iris stands forth as might the drum major of a troop.

And so we drift imperceptibly into those halcyon days of middle June

"When sun, and earth, and sky combine
Man's steps forth from his door incline,
Where daisy bold the meadow treads,
And Spring, the coy, with Summer weds."

Oscar Von Engeln.

NOTES UPON PLATINUM TONING BATHS.

One is nearly always advised, when toning with platinum, to use potassium chloroplatinite and phosphoric acid. Why is this acid to be preferred, one might inquire. I have never had a satisfactory answer to this question. In fact, phosphoric acid would seem to have no advantage over many others, while, on the contrary, it presents certain drawbacks. Such a bath with certain kinds of printing-out-paper gives yellow patches. Moreover, the bath soon becomes useless and manifests a yellow "precipitate" in suspension which it may be is platinic phosphate. It is this yellow deposit, which nothing will prevent, which appears to bring about the yellow staining of the prints here and there to which I have referred.

"The skunk-cabbages are the first of plant life to hear the call."

Phosphoric acid has no chemical reducing action, and, in consequence, it can not in any way facilitate the deposition of the platinum. On the other hand, an acid which would have a tendency to combine with the chlorin ought to facilitate the decomposition of platinic chlorid (Pt. Cl. 2) where this is in contact with the silver that forms the image. Now, several organic acids, particularly oxalic acid, answer to this requirement; and it is for this reason that I have advocated, for several years now, the use of oxalic acid in platinum toning baths.

Latterly a series of comparative trials have been made by me, with matt-surface papers, both collodion and gelatin. In these the effect of double toning with gold and platinum was studied, by employing, after a partial toning in a gold bath, sometimes a bath of platinum made up with phosphoric acid, and sometimes one made up with oxalic acid, prepared in the following way:

Potassium chloroplatinite........	15 grains.
Distilled water..................	30 ounces.
Pure hydrochloric acid..........	75 minims.
Crystallized oxalic acid..........	150 grains.

Now, in every case, this bath shows itself to be more active than one made up with phosphoric acid. Toning is effected more rapidly, the color is better, and one never gets any yellow markings.

The makers of matt-surface papers, I think, would be well advised to recommend the use of a bath of this type with their papers, modified, of course, should it be found necessary, to suit the particular characteristics of their brand; but, at any rate, even if they do not, they ought at least to leave off recommending baths containing phosphoric acid, which are so unsatisfactory. Some have already realized this, and have put forward formulæ which have no phosphoric acid, but merely the salt of platinum with common salt or some other chlorid. These baths do not act badly, but it ought to be pointed out that the action of the platinum salt upon the silver takes place sooner and better if the liquid is acid.—*Photography.*

Prof. R. Namias.

THE MOUNTING OF PHOTOGRAPHS.

There is more to be said on the subject of mounting photographs than might be thought. Every one knows that the primary function of the mount, that of giving the print immunity from damage, keeping it flat, and making it easy to handle, has long been surpassed in the consideration of photographers by its secondary function of rendering the picture the best possible service in an artistic direction.

It is a long cry from the glazed cream-colored card of thirty years ago to the delicately tinted low-toned papers that are now in vogue. Artistically, they are widely opposed — that everyone will admit, but that they differ also in the more commonplace matter of serviceableness is not so readily seen. Nevertheless, it is a fact that the mount — or arrangement of mounts — called, for want of a less cumbersome term, a mount in the American style, has a few drawbacks that render it anything but unimpeachable in regard to the primary function of utility.

The first of these drawbacks to note is the instability of the mount when it is not supported by a frame. Now that the custom of keeping prints in a folio is on the increase, this objection is not a trifling one. Owing to the construction of the American mount, it is impossible to pick one up by its corner, or to look one out from a mass of others, with the ready firmness and impunity attaching to the card mount. The hand must be slid beneath it until it lies directly under the print itself, at which spot, of course, there is most bulk and weight. The weighty portion is by no means in the middle, and, in fact, may be at any unexpected spot; such are the vagaries that the latitude of the method permits. It is therefore not easy to lift these elusive, eel-like articles without a deal of adjustment. If the concern does not balance well upon the hand, off it slides, to damage itself upon the object that stops its fall, and if it does start to fall, it must go, for its floppy edges, dragged away by inner weight, elude any but the most brutal action of the fingers, and one can not grab these things as one grabs yesterday's newspaper.

There is another objection, which, if not of so much importance, might be alleged against the free edges of the various superincumbent papers, which have a way of catching into the loose papers of their friends, sometimes to the mutual damage of both. These points, added to the great risk of soiling, which some of the papers possess; the amount of thought and labor entailed in the mounting of each print; the precision required in trimming the sheets square; and the quantity of different tints that should be stocked, make this style of work not an unmixed blessing. To those who have plenty of leisure, however, and like spending it in such hobbies, there are perhaps few employments more fascinating or more cultivating to the eye, the hand, and the general taste of the worker. The pursuit, then, becomes a labor of love. Soiled, spoiled, torn, dog's eared, or otherwise wasted mounts are replaced *de novo* without the fuming and bad language that a man with little time, little capacity, and little inclination, would bring to his task.

Thus much, for the present, to the debit of mounts in the American style. What remains to be said upon the opposite side of the account so far outweighs as to leave a considerable credit balance. It is this superabundance of advantage over disadvantage that has brought the method so quickly into a ruling fashion, in some cases amounting to a fad. Whether the fashion will be of long or short duration depends entirely upon how soon and how far it will be abused by those who are not content with a good thing, unless they have it all to themselves, and would rather carry it a step farther into badness than share it as a good thing with the multitude. There can be no doubt that with such endless variations as the method is capable of, somebody will soon do the ridiculous thing, and so bring a reaction one step nearer.

To any that may be inclined to err innocently, it may not be out of place to assert at once that the mount must glorify, not itself, but the print. With this beacon-light in view, a right-minded man will not make mounts for their own sake, putting piece upon piece merely because, to his eye, they look pretty in such juxtaposition. It may be taken for granted that so soon as ever attention is attracted in the matter of tone or color, more to the mount than to the picture, the thing has been wrongly done. The greatest merit of the system, in short, lies in this fact.

With a great variety of papers at one's disposal, it is possible to choose those which not only show the print to the best advantage, but also keep each other in countenance. It may be necessary to employ quite a large number of papers to grade off or to brighten up each other, but it is no *sine qua non* of the method that many papers should be used.

On the contrary, the best piece of advice to any one not quite sure of his judgment would be — use as few tints as possible, and where one only is effective, be content with one. In most cases the delightful grays and browns that can be secured in ordinary brown paper will give a sufficiently varied range. Directly the greens, reds, buffs and blues are introduced, trouble and error are likely to come with them.

The artistic modus operandi may perhaps be set forth to some little advantage. The artistic materials at our disposal, then, are, firstly, color and tone; secondly, texture; and thirdly, spacing. By the judicious use of these qualities we may create a wide range of impressions, for it is possible to make any tint look different from what it would be when placed upon white or black paper. And in the matter of tones, exactly the same applies. We can at all times call up and force the complementary color and the opposite tone.

Prize-winner, Kodak Progress Competition. Henry A. Carly.

THE HILLSIDE.

Suppose we have a print that is heavy and dark in the shadows. We lay it upon a paper much darker still, and by contrast its depths of tone are discounted. The reverse, of course, holds good. A faint, light print must be mounted in a light scheme throughout, or else it will look nothing but a patch of white on a dark ground. When the darks of a print want force, a mount is chosen that is some degree lighter than those darks. As a general rule, the most harmonious effect is secured by a tint that takes a middle tonal place between the lights and the shades. This brightens the print without forcing, for it does not extend the gamut of tones either way, but lies well within the compass of the print.

A picture that is hot in color may be cooled by a mount of a rich hue that absorbs the unpleasantness of tint, and cold, unsympathetic prints can often be vested with quality by being placed on a gray or bluish mount. All photographers know how green everything looks upon issuing from the darkroom. The optic nerve has been so hard at work reporting red to the brain that it does not notice the comparatively little amount of red that exists outside the kingdom of the ruby lamp. It is too jaded. Like the slave to narcotics, it wants more and more to make the normal effect. It sees in ordinary light, therefore, only the two remaining primary colors, blue and yellow, which, combining, speak to him of green. This is "retinal fatigue." Upon that principle we make one piece of paper that is too red for our taste look less red by putting a lot of red where it does not matter — that is to say, in the mount. Orange we call up by blue, and purple by yellow, or vice versa in the same manner. Of course, these colors are not used in a raw primary state; they may exist very subtly in the composition of a tint, but a sensitive eye is influenced by them, and rings endless changes upon the various shades of color in the papers by the intermutations that are possible among themselves.

But we do not stop here even. It may be that the print is better for being cut off from its mount by a thin light or dark line. This will not often be necessary where the mount is either darker or lighter than anything in the print, but in those cases where the mount takes a median tone there is likely to be some portion where the print and the mount match and flow one into the other. Even a difference of texture does not quite obviate this, and a thin line of some tint different from anything in the print is therefore agreeable in putting all parts of the picture on the same independent footing toward the mount. Other lines, that is to say, of course, papers cut to show as no more than mere lines, may be effectively introduced where it is desired to add a little brightness, or to echo the tone of the print.

Textures likewise play a great part. Flocks, mottled tints, rolled and rough surfaces, even ribbed papers, may be turned to good account by one who knows what he wants, and how to get it. A contrast just sufficient to emphasize the characteristics of the papers is the desideratum. Seldom does a harsh contrast serve any purpose, except to fight with the picture and make the whole thing scream.

It will be seen how delicate an operation is the thoroughly successful manufacture of a mount in this style, and it will easily be understood that when so much rope is allowed how easy it is for a poor craftsman to hang himself. As a matter of fact, it may be asserted that the American style may bring damnation to quite as many pictures as those to which it brings salvation. This is the misfortune of the method, not its fault. It is, like fire and poison, an excellent servant, but a bad master. In the extreme sublety of taste that can be displayed by its adoption, it forms an artistic test of the mounter as infallibly as does the print it adorns. The elaborate mounts of Mr. F. H. Evans are a proof of the statement. He is not an American, but it would be difficult to find one among our valued American exhibitors in this country whose mounts could be more fittingly upheld as patterns and guides.— *Photography.*

F. C. Tilney.

The Photographic Club of the Art Association, of Indianapolis, which was established in 1902, has just held its first annual exhibition with great success. The club meets the first and third Friday evenings of each month at the John Herron Art Institute.

THE PROGRESSIVE EDUCATIONAL CONVENTION.

A FEW WORDS FROM THE SECRETARY.

The twenty-third annual convention of the Photographers' Association of America will be held at Indianapolis, Indiana, August 4, 5, 6 and 7, 1903, in Das Deutsche Haus (German House). There is every convenience for holding the convention in this hall.

This is the age when all progressive photographers are bending every energy to improve both in mind and workmanship. What better way can this be done than by associating with the brightest minds and finest workmen? Then, again, could you not learn a great deal by exhibiting some of your best work, and comparing it with the best work of others? Surely your work is not beyond criticism and comparison. I want you to send in an exhibit of your best work and some one will be there to criticise it for you, if you so desire, for by no other means can you progress so rapidly. Just send in your exhibit and we will do the rest. Is it not far better to lend your every effort to elevate and uplift the art of photography by sending in an exhibit of your best work, without the prospect of a prize, than it is to compete for prizes which at best are but transitory? How many of our past prize-winners are to-day financially well to do? The question of prizes has become a past issue, for in nearly all cases there has been dissatisfaction with the decisions of the judges, and so your executive board has concluded to follow the precedent established by a former board and discontinue the awarding of prizes, as they but tend to demoralize the profession, rather than to uplift it. Anything that tends to lower the standard of photography should be discouraged whenever and wherever possible.

Prize-winner, Kodak Progress Competition. Miss Lorita Hollander.

LAKE COMO, ITALY.

Can you afford to stay away? I think not.

Your executive board has worked incessantly so that no one shall go away dissatisfied. A very instructive program has been arranged, so that you will derive much benefit from attending and listening to the many good lectures planned for you. Then again we are expecting a grand display from the leading photographers of this and foreign countries.

Art lectures, business talks, demonstrations and a general good time will be had. Think this over and see if it would not be to your advantage, both socially and financially, to be there. Many of the leading photographers of to-day owe their success to having attended our national conventions in the past. If you will but tax your memory just a trifle, you can not fail to see where younger photographers have rapidly taken the places of the old-time masters. This has all come from their having attended our national conventions and keeping their eyes and ears open, while the old masters, confident in their own abilities, have stayed at home and gradually, little by little, drifted back until to-day they are scarcely ever heard from. Now, it is up to you to decide whether you want to become a representative workman or not. Do not understand me to say that it would be impossible for you to become a good workman unless you attended the national convention, but, by attending it, you will be thrown in with all the bright minds of the country, which of itself will be a great aid to you. An exchange of ideas among professional men always helps to improve, and improvement, both in workmanship and business methods, can not fail to have beneficial effects. We want you to come and partake of the many good things prepared for you.

Will you come? Let me hear from you.

THE AMUSEMENT PART OF OUR PROGRAM.

Our amusement committee has worked hard and faithfully so that all will leave the beautiful city of Indianapolis feeling they have been well taken care of, well repaid for their efforts, and that all expenses incurred are more than offset by the increased knowledge gained, and the very pleasant time enjoyed. Bring your wives and sweethearts, and they will be well taken care of. Arrangements will be made with the hotels and railroads which will be announced later.

Make up your mind to go now. Get to work at once on your exhibit; do not put it off until too late, and do not forget to write to the secretary and tell him that you are going.

Very respectfully and fraternally yours,

Geo. G. Holloway,
Sec'y P. A. of A.
Terre Haute, Indiana.

THE AMERICAN LAW OF COPYRIGHTS

AS APPLIED TO THE PROTECTION OF PHOTOGRAPHS.

The misconception surrounding copyright procedure in the United States is nowhere plainer than in the case of amateur photographers.

To be sure, the verbiage of the statutes bearing on the subject is somewhat imposing, but on the whole it is doubtful if any branch of law is really freer from the proverbial red-tape and technicalities of language than that which relates to copyright — and certainly no branch of governmental management is conducted upon lines of greater efficacy and satisfaction to all concerned.

Some idea of the volume of business which passes through the copyright office may be gleaned from the fact that over ninety thousand titles for copyright were considered during 1899 and of this number about eighty-six thousand actual entries were made, and nearly six thousand applications (accompanied by fees) were returned to their senders, because the entries desired were not permitted by the provisions of our copyright law. Over twenty-five thousand copyright certificates were issued and more than one hundred and twenty-five thousand books, periodicals, photographs, etc., were received for deposit.

From a fear of it's being too complicated a matter, amateur photographers have been unduly loath to take advantage of the law which gives them the right of protection, in the preparation and sale of their artistic products. To make clear the few misunderstood points for their benefit has, therefore, been the object of the present article. The sale of the really meritorious photograph has always been an easy matter, but the risk of having it copied or appropriated by the recipient when it was offered for sale has deterred many amateurs from taking the risk, and, as a result, they have foregone the remuneration to be so derived.

Of course the reputable photographic journals are not conducted upon any such basis, but some amateurs have learned from experience that in entering the so-called "prize contests" of some of the minor ones and some of the weeklies, they are really *giving away* their pictures (in those cases where all pictures entered become the property of the publication) for merely a *chance* to gain a prize — sometimes of more or less doubtful value.

When an entry in a contest is made, it is of course a tacit acceptance of the terms governing the contest, no matter how one-sided or unjust the regulations may be.

Copyrights are not expensive, and it is never a disadvantage for the amateur to protect his productions when he enters them for competition, for he may then stipulate in the letter accompanying the entry that the pictures are to be returned to him in case they do not win a prize; but in event of being prize-winners, an assignment of the copyright will be executed to the publisher. No publisher, whose intentions are honest, will object to such procedure.

Prize-winner, Kodak Progress Competition. Mrs Helen W. Cooke.

BUILDING.

Many of the engraving companies which issue calendars and other artistic hangers are always on the lookout for meritorious photographs, whether they be the products of professional or amateur — and, if previously copyrighted, the amateur may send them to one after another of these companies with no fear that through any misadventure his property-rights in them may be lost.

And now to digest the law of copyrights, as applicable to the protection of photographs.

Briefly, the cost to citizens of this country is 50 cents for each photograph entered, and the term of protection is twenty-eight years — though an additional term of fourteen years more may be secured by a reëntry six months before the first term expires, and such reëntry may be either by the original author or his personal representatives or assignees.

The law of 1874 (U. S. Rev. Stat. Title 60; ch. 3), which is the basis of the present Copyright Law, has been amended by various Acts of Congress approved during various years since then, and as it exists to-day may thus briefly be summarized.

The Librarian of Congress is required to make an annual report to Congress of the number and description of the year's entries for copyright.

The author and his personal representatives or assignees are granted the exclusive privilege of printing and selling replicas of the copyrighted photograph.

The original term is twenty-eight years and an additional fourteen years may be secured when desired, as already stated.

Copyrights are assignable in law by a written instrument, but to be binding upon subsequent purchasers for value and without notice, they must be recorded in the office of the Librarian of Congress within sixty days after their execution.

No person is entitled to a copyright unless *on or before the day of publication* he shall deposit in the mails within the limits of the United States, addressed to the Librarian of Congress, at Washington, a printed copy of the title of the photograph on which he desires copyright; and *not later than the day of publication* he must similarly forward to the same destination two copies of such photograph, which must be printed from a negative made within the United States.

It has been held that a typewritten title suffices for the required "printed title," the object being apparently to secure a legible record for filing and subsequent reference. It would seem that where plates are exposed outside the limits of this country, but where the actual development is done here, that the prints from such negatives are undeniably eligible for copyright; but not so where development occurs abroad, though the difficulty may be avoided by making a duplicate negative from the original and printing from that. So, too, reproductions or transfers from original copyrighted negatives may be printed from and the resulting prints be eligible for copyright.

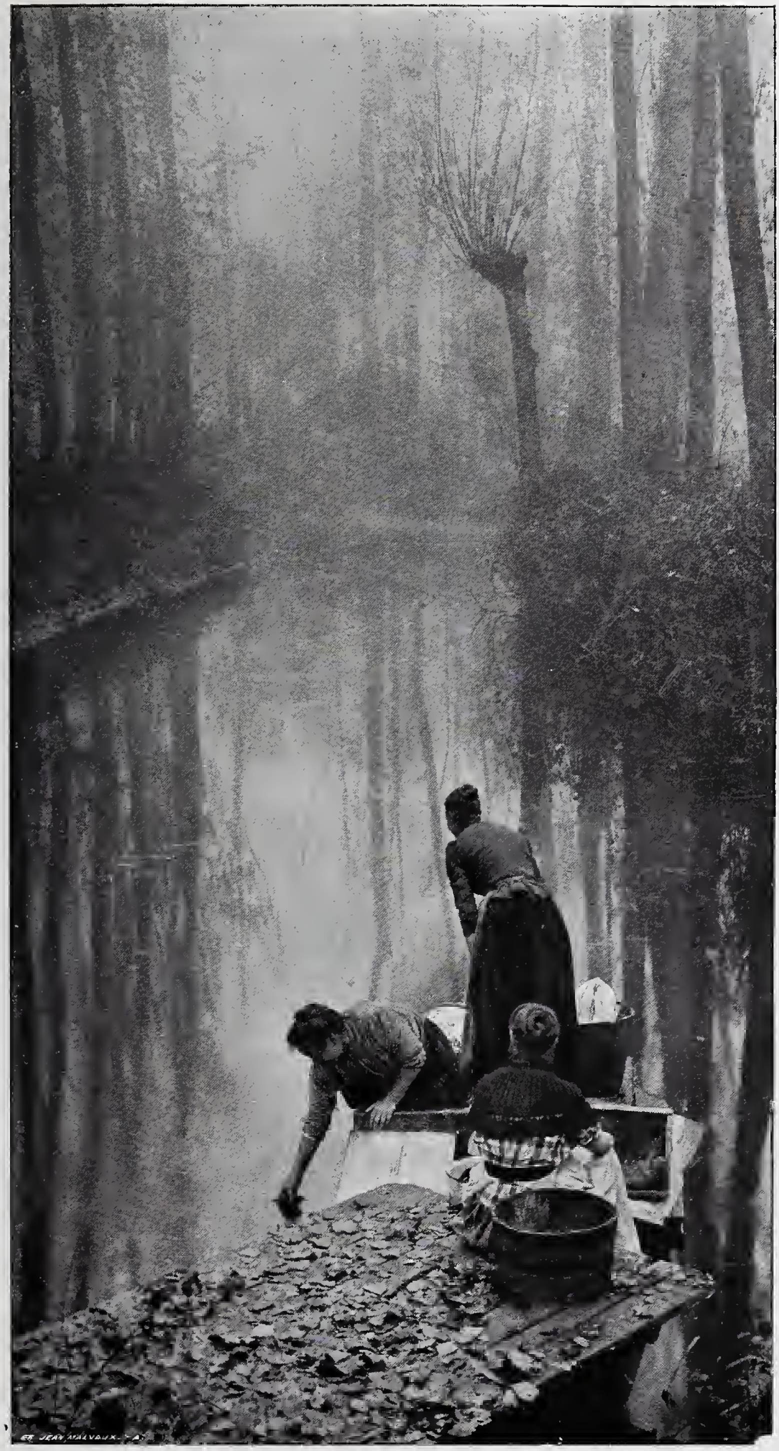
During the continuance of the copyright term, importation into the United States of such photograph is prohibited except: (1) photographs printed more than twenty years at the date of importation; or (2) imported by authority or for the use of the United States or the Library of Congress; or (3) imported in good faith for the use of any institute of educational character, or for encouragement of the fine arts; or (4) imported by persons from foreign countries where the same have been used abroad by them not less than one year (26 Stat. at Large 604); or (5) not more than two copies purchased abroad for use, and not for sale, and subject to import duty thereon.

Entry of copyright is according to the following form: "Be it remembered that on the ——— day of ———, A. B. of ——— hath deposited in this office the title of a photograph, the title or description of which is in the following words, to wit: ———————————; in conformity with the laws of the United States, respecting copyrights. C. D., Librarian of Congress."

A copy of this title or description, under seal, shall be given to the proprietor whenever he shall require it.

Fees are as follows: For recording the title or description, 50 cents; for copies under seal of such record, 50 cents; for recording and certifying an assignment, $1; for each copy of such assignment, $1. Where the author or producer is not a citizen of this country, the charge for each of the first two services is $1.

A weekly catalogue of all recorded title entries — amounting to some four


GR. JEAN MALVAUX.

C. Puyo. Courtesy of the *Bulletin du Photo-Club de Paris.*

AU LAVOIR.

thousand pages a year — is issued by the Secretary of the Treasury, and can be examined at the office of any Collector of Customs, or will be mailed regularly for $5 a year.

Failure on the part of the proprietor of a copyright to file the requisite two copies, renders him liable to a penalty of $25, recoverable in any District Court.

Copyright photographs should be delivered to the local postmaster for transmission, and a receipt for same will be given if requested. The postmaster will then forward the package to destination.

No action for copyright infringement can be maintained unless notice is given on the copyrighted photograph by inscribing "upon some visible portion thereof, or on the substance on which the same shall be mounted," words of the following import, to-wit: "Copyright, 1901, by A. B."

The penalty for so inscribing a photograph when the same has not been duly copyrighted, whether the photograph was produced in this country or abroad, is $100; and the United States Circuit Courts are empowered to enjoin the publication and sale of photographs so illegally marked.

Any person who shall publish any photograph which has been duly copyrighted, without the written consent of the proprietor, attested by two witnesses, or publish the same in part or by varying the main design with intent to evade the law, or where such photograph shall be exposed for sale, renders himself liable to a penalty fixed at not less than $100 nor more than $5,000 — half to go to the proprietor, and the other half to the use of the United States.

Actions, based on forfeitures or penalties under the Copyright Law, must be commenced within two years after the arising of the cause of action.

Circuit Courts (and District Courts having similar jurisdiction) have power on a bill of equity filed by any aggrieved party, to grant injunctions to prevent violations of any copyright laws.

Writs of error may be allowed to review any final judgment at law, and appeals may be allowed from any final decree in equity.

Foreign citizens are permitted to enjoy the privileges of the United States Copyright Law only when their own country or nation permits citizens of the United States to enjoy the benefit of the copyright laws of such foreign state, upon practically the same terms; or when the foreign nation is a party to an international agreement, which provides for reciprocity in copyright grants, by the terms of which the United States at its pleasure may become a party.

In order to expedite the business of the office and to simplify matters, Mr. Thorwald Solberg, the present Register of Copyrights, makes some suggestions which intending patrons will do well to observe. Among them are the following:

Remit only the exact fees.

See that title accompanies remittance with name and address of sender clearly stated.

Do *not* send return postage.

Mark on the article itself — not on the wrapper — the name and address of the sender.

On sending a photograph, mark a title or name upon it, and if one of a series, add to each a distinguishing mark or number.

If a receipt for deposit is required, enclose a filled-out unsigned receipt in the package with the article, not in a separate letter.

Send *only two* copies of each photograph for deposit.

If a certificate *is* desired, send an uncanceled 10-cent internal revenue stamp, pinned to the application.

Send the whole affair — application, title, fee and, when possible, the two copies — in one and the same parcel. By using the addressed franking (about which consult postmaster) the addressed *package will not require any postage* and will not be subject to any limits of weight or size.

William Perry Hopkins, LL.B.

NON-PHOTOGRAPHIC NOTIONS FOR LANTERN-SLIDE MAKERS.

The utilization of waste products is so important that I need offer no apology for suggesting ways in which lantern-slide makers may turn to good account some of the débris which they inevitably produce. For the best of us can not possibly make a perfect lantern picture every time; it is not in fallible human nature to do so; and, even if our skill never failed, the most conscientious platemaker is not impeccable. However good your picture may be, you are bound to discard it if there be a torpedo in the glassy lake or an air-ship of similar shape floating among the clouds.

We use some, of course, if we are economical, as cover-glasses. With warm water, or hydrochloric acid (or both), it is easily done. Being rather unpleasant drudgery, it is not a bad idea to turn the work over to the rising generation, which, to make a little extra pocket-money, will gladly keep you supplied at a rate considerably below the market price.

My first original idea on the subject occurred some time ago, when, in weeding out a lot of family papers and relics, I came upon a considerable collection of locks of hair, carefully screwed up in papers, inscribed "Tommy's first curls, cut 6th June, 1838;" "Grandfather's hair, cut December, 1861," and so on. What to do with such relics bothered me. Some of them I did not value at all, some a little; but then I felt myself a trustee, as it were, for any other member of the family of a more sentimental turn, to whom they would be treasures. To Tommy, for instance, now bald as an egg, it would doubtless be delightful to have evidence that he once was otherwise. Besides, there were a few among them that had a distinct money value, such as a lock of the Iron Duke's hair (ever such fine white filaments!), another of Mendelssohn's, cut after death, not to mention a third, which, to some loyal souls, might be most pre-

E. Cugnieres. Courtesy of the *Bulletin du Photo-Club de Paris.*

VERS L'ECOLE.

cious of all — some hairs from the tail of George the Fourth's favorite horse! For this no reasonable offer will be refused; the precious relic goes at once to the highest bidder, if accompanied by a remittance.

While I hesitated, with one eye on the fire and the other on the hairy mementos — this is not strictly correct; in fact, it is impossible, but you know what I mean — while I hesitated, my glance (my real eyes this time, not my mind's eye, Horatio) fell on a pile of cover-glasses which I had just purchased at threepence a dozen from a domestic dealer. In a flash the solution of the difficulty came to me. I coiled the Duke of Wellington's snowy lock neatly and "made it up" betwen two of the cover-glasses, enshrining with it a neatly written slip setting forth its nature and pedigree. The result was quite charming, and ere long all the contents of the dusty, greasy wisps of paper had been similarly housed. Dealt with in this fashion, such quaint and sometimes pathetic relics, which are to be found hidden away somewhere in every home, become agreeable and exhibitable objects. Try it on your family locks and see if you don't agree with me. Remember that only a small lock of hair should be so treated; it should be carefully wiped or brushed before it is encased (to make it brighter and to prevent greasy marks on the glass), and a slip of paper describing it should be placed *inside*. Quite a large number can be kept in orderly fashion, available for reference when grandmamma calls, in a drawer, box, or cabinet. For families curious in such matters there might be yearly preservation of clippings, which would serve to show the gradual change of Claude's lock from gold to jet, or the gradation of his father's black, through gray, to white.

My second notion is for stamp collectors. I had not tried it, because postage stamps are among the few subjects I do not collect. None of the methods at present in use by philatelists seem to me to be satisfactory; they all ensure the gradual deterioration of such peculiarly perishable commodities. You must have a glazier's diamond and a frame (very easily made), which will enable you to cut a cover-glass accurately into four equal portions. You then mount your stamp between two pieces (with a written description, if desired), and there is your priceless penny, Mauritius, practically safe for all time from the action of air, damp and dirty fingers. A cabinet for a collection treated in this novel fashion could easily be made. Perhaps it would be well, in the case of valuable specimens, to use silk or linen binders. The class of collectors known, I believe, as bloaters, who go in for "blocks" of two or four stamps, could use whole cover-glasses; indeed, were space no object, I would recommend these in all cases. I need not explain to the philatelist that he would be able to see watermarks and other details even better than if the stamps were laid down in albums; and he would be secure from the depredations of those zealous connoisseurs who have been known to feign myopia, and, while looking closely at an album, lick off a valuable stamp.

E. Rimbault Dibdin.

SAN FRANCISCO SALON.

The California Camera Club and the San Francisco Art Association announce that the Third San Francisco Photographic Salon will be held in October, 1903.

In order to encourage liberal contributions from pictorial photographers at home and abroad, and to save the expense of framing pictures that may not be accepted, as well as the greater expense of transportation, pictures suitably mounted or matted will be received from contributors in the United States, and such as are accepted by the Jury of Selection will be glazed by the Salon Executive Committee at the exhibitor's expense.

Address communications to Third San Francisco Photographic Salon, 819 Market street, San Francisco, California.

Note the Seneca Camera Company's new advertisement in this issue. Catalogues of their new models will be sent on application.

PARIS AND THE PHOTO-CLUB.

If Paris is France, then the Photo Club de Paris is the photographic headquarters of France, and the interest of the French people in the art is unbounded. In Paris itself one is likely to use his camera less than in the country, for where is there a building, monument or interesting corner which has not been photographed a hundred times? It is the life of the people that remains among the possibilities of illustrative photography in Paris; the sidewalk cafés, picnics in the woods of Boulogne or of Vincennes, the wedding parties and the interesting outdoor trades. The wedding party outing is a French institution unknown in America. After the wedding, bridegroom and guests get in a line of fine carriages, if rich; into cabs, if middle class; and into a big omnibus if poorer, but go they must, either through one of the two big parks or one of the zoölogical gardens, and

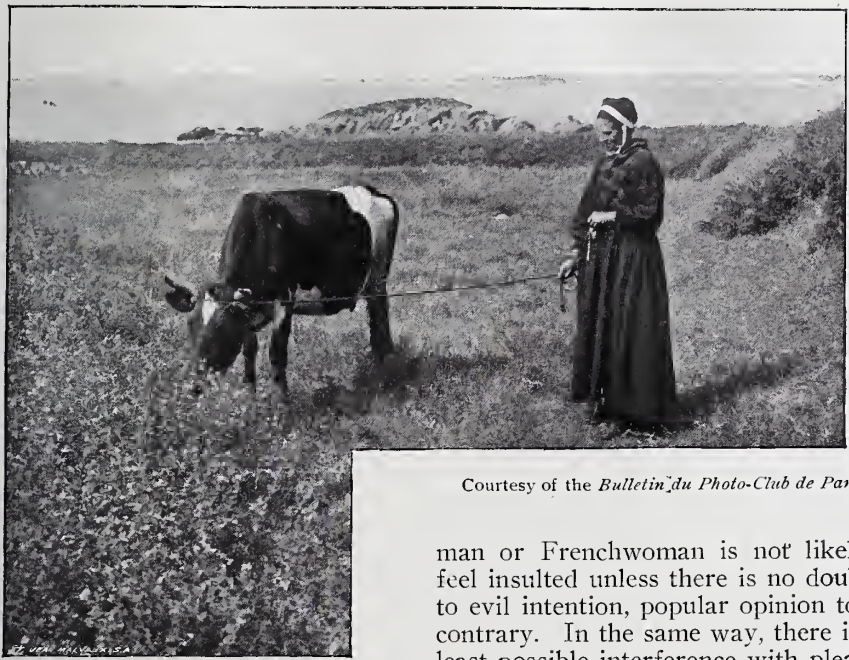
F. Boissonnas. Courtesy of the *Bulletin du Photo-Club de Paris.*

AUTUMN.

take dinner at a restaurant, hotel or tavern, according to their class and means. They are always interesting, the brides romantically shy and the grooms interestingly affectionate and courageous. If they can afford it, there are plenty of flowers for the whole party; if not, the bride just carries a bunch, but the pair is radiant with happiness if for the only time in their lives. The costumes of the Parisians, even those of the working classes, are rarely remarkable, although to us, the nounous, or nurses with flowing robes and long streamers of wide ribbon from cap to feet, form a class by themselves. Photography can not do justice to the life, bustle and constant movement of Paris. The hired and private carriages are many times more numerous than in any of our cities. Rather picturesque cabbies, perched in front, crack their whips, and, with half whistle, half chirrup, stimulate the tired horses. The stream of bicyclers, fewer than formerly, but still far more abundant than with us; and the noisy, malodorous, vindictive automobiles with their trumpets, spark exploders, trails of dust, and many victims; the constant throng of people in the streets; the omnibuses and the thousands of carriages; these cause the whirl of the Paris streets. The motion-picture man may convey an idea, but the snap-shot photographer is helpless and hopeless.

I do not know whether Paris is the greatest photographic center in the world or not, but it conveys that impression to me. Kodakers are counted by thousands and artistic amateurs are numerous. Photographic materials are more within the reach of the many than with us. Fine lenses are one-half the price of ours, or less, plates are cheaper, sun printing-paper is less than one-half of the American price; for instance, 5 by 7 inch paper, American make, 12 cents per dozen in place of 30 cents. French cameras are cheap, but the American boxes are liked best, and, being imported, they cost a little more than at home. Germany and France hold the patents on making fine lenses and our tariff adds greatly to the cost which we have to pay.

With such photographic tastes, one might expect to find many photographic societies, each having its own inducements and attractions and each teaching or representing different variations in ideas in photographic thought. Instead, with the strong common sense which characterizes the French people in very many ways, there is one great club, and that is the Photo Club de Paris. It occupies an entire building — a very unusual thing in Paris — in the rear of number 44 Rue des Mathurins, built expressly for the club, having many rooms, fitted with all improvements. In the audience-room, which is comparatively small, are held the annual Paris Photographic Salons, given by the club. In addition to the developing-rooms used by the members, is one, very perfectly fitted up, on the ground floor, for the use of visitors. Having exhibited at the last Salon of the Photo Club, I asked for the privilege of developing my films at the clubhouse, a courtesy which was graciously given. No charge is made for the rooms, but visitors may purchase all materials and may have the assistance of skilled employes in washing, drying, etc. The employes of the club number about a dozen, under the direction of Mr. Paul Bourgeois, the secretary-general, and they do the developing, printing, finishing, etc., for such members as may content themselves with the exposure of negatives. This is a source of income to the club, and the work is done to suit individual tastes to a far greater extent than is possible in our department-store photography. The club is a recent one, founded in 1888, and its membership is restricted to amateurs. The club, as such, sends approved work of members to photographic exhibitions in other cities, as a club exhibit, such an exhibit for Brussels being spread upon the floor at the time when Mr. Bourgeois showed the club-rooms to me. The club publishes the handsomest French photographic magazine, under the editorship of the secretary. This able photographer is the manager of the entire French exhibit — not photographic only — at the coming St. Louis exposition. He speaks and writes English well, a



Courtesy of the *Bulletin du Photo-Club de Paris.*

C. Puyo.

very unusual thing among the French, who are, more than any other enlightened nation, content with the knowledge of their own language exclusively. Besides Mr. Bourgeois, the only noted French photographer whom I met at the Photo Club was Mr. C. Puyo, whose work is eminently pictorial, and a class by itself. Instead of being the typical artist with hollow cheeks, sunken eyes and a weary, distant look, Mr. Puyo is a typical business man, ruddy, robust, and good natured, and his mouth was decorated with a decidedly German-looking pipe. He has the artist's pleasure at having his work admired, but his conversation is restricted to the French language. He gave me a copy of his interesting essay upon his special method of lighting models by combined daylight and flash-light, by which he produces the precise lighting that he desires with subordination of needless detail.

A strong French characteristic is tolerance and non-interference. If one salutes a wedding party, he gets a friendly salute in return. A Frenchman or Frenchwoman is not likely to feel insulted unless there is no doubt as to evil intention, popular opinion to the contrary. In the same way, there is the least possible interference with pleasure or amusement. This trait gives a marked feeling of great personal freedom, as compared with our country. Take the bicycle, for instance. An American rider at home feels himself an object of constant espionage, and arrests are made — or, at least, were made until the bicycle was nearly driven out of existence at home — on the smallest pretexts. In Paris, one may, if he please, coast down one of the finest boulevards in the world with hands off or feet off, in fact, as he pleases, without hindrance or even suggestion to the contrary. The rider is responsible for the results, and if he is a party to an accident, his manner of riding will then receive due consideration and punishment meted accordingly. The laws give full rights to the bicycle rider, and a pleasant outing is not continually spoiled by ill-natured drivers, who, without remedy, in our country, force riders to dismount by driving directly at them. For these excellent reasons the bicycle is, by no means, out of date on the other side of the ocean. I may repeat a word of censure, however, against the reckless automobile driving, often at twenty or thirty miles an hour in Paris. The Parisians are fortunate in having the pleasantest summer climate, the air being usually pure and fresh, making mere existence a pleasure. Insects by day or night are rare, and, during even the first week in August, I slept under a blanket every night.

The lazy ones on the streets of Paris take the greatest interest in the traveling photographer. With hand camera and no tripod to attract attention, I never made one film exposure without the eager question, "Did you get it, sir," and the stereotyped answer "I hope so," after which the spectators walk slowly away, feeling that their duty has been conscientiously performed.

Since writing the above the Photo Club has sent out its announcement for the Eighth Paris Photographic Salon under the same regulations as heretofore. It is an exceedingly pleasant thing to say that, although the jury is composed of the noted artists of the most artistic city in the world, that jury earnestly tried to please those who favor the club by forwarding exhibits. It is not the narrow-minded policy of this greatest of photographic societies to give the greatest possible offense by wholesale refusals, but every person, known or unknown, who forwards artistic photographic work may confidently expect that it, or part of it, will be catalogued. Limited as to wall space, very large frames are excluded. Nevertheless there were five hundred and fifty exhibits at the last Salon from one-half that number of photographers. The variety of work shown was, therefore, very great, and the display most instructive to the visitors.

Walter Zimmerman.

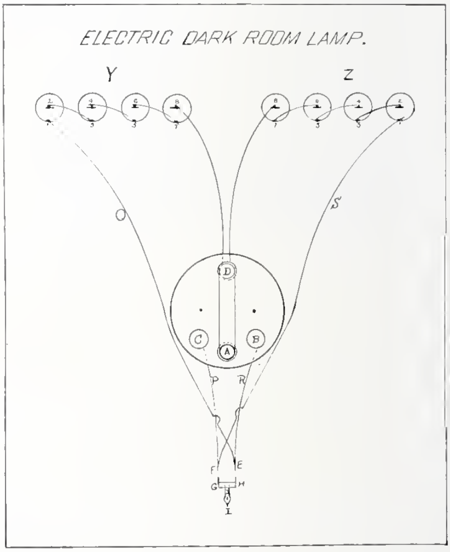
NORTH-WESTERN PHOTOGRAPHERS' ASSOCIATION.

The annual convention will be held August 11, 12 and 13, at Minneapolis, Minnesota. A very interesting program has been arranged, full particulars of which will be got on application to the secretary, John A. Gunderson, Winona, Minnesota.

AN ELECTRIC DARKROOM LAMP.

In this arrangement, two batteries of four dry cells each are used. Each four are connected in series and are used with a five and one-half volt, two candle-power lamp. The addition of another cell to the batteries would result in the burning out of the lamp; three might be used, but their efficiency is limited. Four have been ascertained to be the correct number to use.

Numbers 2-4-6-8 are the positive poles, and 1-3-5-7 are the negative poles. We will describe in detail the connecting of only one battery, as the other is connected in exactly the same manner. In making all connections, No. 18 Commercial lamp cord is used, as it is flexible and has the required resistance.


ELECTRIC DARK ROOM LAMP.

Connect the positive pole marked 2 to the negative pole marked 3, 4 to 5, 6 to 7, by cleaning the wire to a sufficient length, say an inch, and winding it around the positive screw twice, quite tightly, and then back on itself, screw on the nut tightly, but not tight enough to destroy the holding force of the thread. Insert the other end into the negative pole of the next cell, bring it around and wind it on itself, turn screw to place, with the same precaution as before. Connect the other cells in the same manner.

In the same manner, attach wire to positive pole 8. This wire is of any length desired, with the free end attached to the switch at D (the same wire from the other battery is attached to the same point D), turn down nut tightly. Attach wire to the negative pole 1, any desired length, then attach another wire at point C on switch, any desired length. This is wire P, which is then attached to lamp socket at G. Attach wire O to lamp socket at H, turn switch AD to point C, completing the circuit in battery Y and the light appears.

Wire R is connected in the same manner as wire P and is attached to wire O at E; wire S is connected in the same manner as wire O, and is attached to wire P at F. Connections E and F are made near switch, and well wound with tape. Wires F G and E H may be of any desired length to suit each individual case. Point A on switch is "dead," and switch A D should rest upon it as shown above when lights are not in use; this practice will keep it in proper tension, and it will practically never get out of order. Lamp I is screwed into socket G H. Be careful not to give it an extra turn or you will screw the lamp from its base, and it will be of no further value.

The old ruby lamp may be used by inserting the wires F G and E H through the ventilator of the lamp, and then attach the socket. If it is not desirable to use the old lamp, a bag made of ruby paper in which the socket and lamp is enclosed can be used. The flexible wire permits of the lamp being used in any position and any place, and may be suspended over the workboard.

By the latter arrangement some light is lost and can be overcome by using a small *new* tin funnel. Pass the wires down through the small end, attach socket and lamp, cover large end with ruby paper. The wire is sufficiently strong to hold the weight.

F. Michelis. Courtesy of the *Bulletin du Photo-Club de Paris.*

The batteries will last about eighteen months, and are not susceptible to heat and dampness.

In using the light, one battery is used for fifteen minutes and then switched off and the other battery switched on and used for a like length of time, and then the first one is turned on again, and so on indefinitely. While the second battery "Z" is in use the first "Y" is building up and so the process continues.

The light from this two-candle-power

lamp is more than equal to the amount of light given off by a one-inch wick in an oil lamp.

The chief recommendations for this light is its small cost and great convenience.

The following show the cost:

8 Masco cells	$ .96
1 3-pole switch	.09
1 Lamp socket	.05
1 2-c.p. 5½ v. lamp	.30
Wire and tape	.10
Total cost	$1.50

Mr. William R. Price, at the Manhattan Electrical Supply Company, 188 Fifth avenue, Chicago, will courteously assist whoever may call on him, in connecting these batteries. He is an amateur photographer like ourselves and knows what is needed.

J. SHERMAN ROOT.

OHIO-MICHIGAN PHOTOGRAPHERS' ASSOCIATION.

The annual convention will be held on July 22, 23 and 24, at Saginaw, Michigan. All particulars from the secretary, F. W. Wolf, 1008 Pearl street, Cleveland, Ohio.

BLUE LANTERN SLIDES.

If the slides had been dried, soak for a few minutes in cold water, and then bleach in a ten per cent solution of potassium ferricyanid, after which they are washed for ten minutes and then immersed in a ten per cent solution of ferric chlorid. They are then rinsed, placed in a hypo bath for half a minute, washed and brightened in sulphuric acid, eight minims per ounce of water.

TO PREVENT SMOKE FROM FLASH-LIGHT.

To prevent the smoke from magnesium ribbon or powder from spreading throughout the room, support over the point where the ignition is to take place a large flat pad of damp wool lint. This may be done by tacking the lint to the underside of a board supported on legs. When ignition takes place, the products of combustion for the most part will become absorbed by the wool.

MAKING OPALINES.

The opaline sticks up its sham self everywhere before one at the seaside resorts, but, like 'margarine and many other "ines," it fills a place because it is cheap without being so bad. Many may wish to prepare souvenirs of this kind for their friends, and while one can scarcely suppose that there is any need to give detailed directions, there are one or two little points which can give rise to failure. The opaline is a P.O.P. print squeegeed to a piece of glass, which generally, more or less, has a beveled edge; the back of the print, when once the gelatin surface has stuck firmly to the glass, being fixed to a leatherette mount. The one point requiring care is in fixing the prints down to the glass. If the prints are firmly squeegeed, just as they come from the wash water, there is no need to use any extra aid to secure the print. It is put under pressure in the usual way. But if the prints have been dried, or if they were alumed before toning, they should be soaked in a warm, weak solution of gelatin — about 100 grains of gelatin in a pint of water. In this bath the prints are allowed to soak for at least ten minutes, the glasses are brought into the liquid, the prints placed in position, and the two removed together to be squeegeed. It is well to have the prints trimmed the exact size they are required to be on the glass, to adjust their position to a nicety, and then to back up the picture with various colored papers.

SOME MORE ROUTINE.

Speaking about routine reminds me of what I have often noticed regarding the workings of great minds: how they arrive at the same conclusions by different routes. For instance, Mr. Todd says something in nearly every PHOTO-BEACON which I had previously said to myself.

Talk about running in the same old ruts year after year and following the same routine in our work! Now, I wonder if that is not the natural order of things and the proper way for us to do? Have you ever noticed the sun still

Mrs. E. L. Watson Shulze. Courtesy of the *Bulletin du Photo-Club de Paris.*

rises in the east as it did thousands of years ago? We would not have the sun change his routine for anything. It's the routine that holds us down to the proper place to do our work, as the kite is held by its string or the train of cars is kept in place by the iron track. If it was not for the routine our world would be a world of chance.

But, do not forget to remember, following our routine is not all of the best of life. If you can do your work easier than your fellow traveler can do his, just reach over and grease the curves in his track, and help him to keep up with you. Also imitate the sun as much as possible and let your rays shine out and warm the hearts of your neighbors and give their clouds a silver lining. Do not blindly follow a routine like a horse in a bark mill, which goes to sleep at his work and which still continues to go in a circle when turned out to pasture. But make it your routine to do and say and see all the good things possible as you journey through life.

C. E. Walter.

MOUNTING MATERIALS.

There is nothing so annoying in the whole photographic business as to find, after all the care and attention we have bestowed upon our pictures, that they do not stick properly to the cards. It may be sometimes carelessness in mounting, but the principal trouble lies in the inherent defects of the mounting materials. Starch paste has many properties of the flour paste, and it must not be used after being mixed a day, that is, if made in the ordinary way. I am about to describe a paste which has many advantages which the starch paste does not possess.

Take one and three-fourths ounces of the best arrowroot and eighty grains of sheet gelatin; put the arrowroot in a small pan and add one ounce of water, mix thoroughly until it is a thick cream, and then add 14 ounces of water and the gelatin broken into small fragments. Boil for four or five minutes, set aside until partially cool, then add one ounce methyl spirit and six drops of carbolic acid. Be very particular to add the spirit in a gentle stream, stirring rapidly all the time. You have now fifteen ounces of the best mounting material you ever used. Keep in a corked jar and take out as much as may be required for the time, work it up with the brush and you will have paste as smooth as cream without lumps and which will not decompose. Wm. E. Brown.

In the case of roll films, it is not necessary to wait till the whole roll is exposed before developing. Open the camera in the darkroom, cut off the exposed film without cutting the black paper, get a piece of gum label and gum it onto the black paper, overlapping the cut end of the film about one-sixteenth of an inch. The film can then be wound back again on the roller ready for insertion in daylight.— M. B.

SOME PHOTOGRAPHIC NOVELTIES.

One of the most interesting afternoons that I have spent for some time was in the western office of the Rochester Optical & Camera Company, overhauling the latest productions of the factory, and more particularly in investigating the new features of the instruments and specialties.

The first article that demanded my attention was the Premo Film Pack. When in Rochester in the fall of the year the factory's superintendent gave me hints as to what was coming, but as the apparatus had not been perfected I did not feel at liberty to say one word about it, even to my own closest relations, but nevertheless I very anxiously awaited the advent of this new feature which I felt convinced would appeal to a very large number of camera users.

The Premo Film Pack is now on the market and can be had from all dealers. It consists of a very compact light-proof device for carrying twelve films ready for exposure. By its use it is possible to convert a plate camera into a daylight-loading film camera by the addition of a special holder or adapter, which happens to be a very simple contrivance.

It is rather difficult to describe the working of the device, but I can best begin by saying that it is exceedingly simple and apparently positive, with no chance of anything going out of order. The films are marketed in packs of one dozen each, which take up no more room than an ordinary plateholder. Projecting from the end of the pack are as many tags as there are exposures in the pack. Roughly speaking, it may be said that these tags form the ends of layers of opaque paper which lie between the different exposures.

When exposure number one is to be made the first tag is pulled out and this permits the first film to be exposed. When tag number two is pulled this pulls the exposed film from the front of the pack around one of the ends and stores it at the back of the films and at the same time it withdraws the black paper from the front of the second film which is now ready for exposure, and so on with all the other films in the pack.

When twelve exposures have been made the last tag is pulled and this brings a strip of black paper in front of the last exposure and so protects both it and all the other films in the pack from exposure to light.

This is rather a wordy description, but the actual practice is as quick as a wink and so it ought to be possible, if one wants to race against time, to make a dozen exposures in less than half a minute. Of course, only a fool would want to do that kind of thing.

Since the film pack is used in a holder it can be removed from the back of the camera whenever wanted and it is, therefore, possible to focus on the ground glass between each exposure, and thus to enjoy the full advantages of the outfit.

In a sentence, the features of this new device can be summed up thus: by their use the photographer is able to load and unload his camera in daylight, focus each exposure if desired, but at the same time to be free of the weight of glass plates which every one knows is a great advantage when touring.

I have not had the opportunity of testing this new device in actual practice because it makes its appearance on the market just as this issue is being prepared for the press, but a few weeks ago I had an opportunity of testing the emulsion used to coat the films and I find that it is orthochromatic in its character, being sensitive not only to the blues but to the blue-greens, yellow-greens and yellows, and that theoretically from special scientific tests both the isochrome and the chromatic curve correctors should produce good results with it, the latter in particular bringing out the blue-green rays.

In all likelihood in the next issue I will be able to tell the results of my experience in actual working with the film adapter.

Another new design issued by this firm is the Premo Daylight Developer which is designed for the development of dry plates in daylight. This instrument is illustrated and described in the new catalogue just issued by the firm, but no model had appeared at the office when I called and I am therefore unable to describe its methods of working, but expect to be able to do so in next issue.

When we come to the cameras issued by the firm the first feature that strikes me is the most remarkable advance in the quality of the workmanship. This is most strikingly illustrated in their latest model which they have named "Premo Supreme," which is a beautiful example of handsome cabinetwork and designing. I am rather fond of nice tools, in fact my most foolish expenditures in life have been along the line of beautiful apparatus, and for almost one hour I sat with a 5 by 7 instrument of this kind on my knees and went minutely into every detail of its construction, and the more I examined it the more I admired its beautiful workmanship and the great ingenuity displayed in every detail to overcome every possible difficulty that could arise. I feel it is unnecessary for me to specify all these details, but will endeavor to sum up its characteristics in one phrase and say "it is a compendium of camera-makers' brains."

I will pass by with mere mention the ordinary line of Premos, which are much on the lines of previous years with minor improvements, and pass on to the Premo box camera, which, in general design, resembles the Cyclone, Jr., of previous years, but which is especially designed for use with the film pack just described. It is a marvel of lightness, and more extraordinary still, is offered for sale at the remarkably low price of $4. Instead of it one may possess the Premo folding film camera, which is built for 3¼ by 4¼ inch pictures and retails for $10.

To those who would like to know more of these goods and are unable to visit a store to examine them I would advise immediate application to the manufacturers, The Rochester Optical & Camera Company, Rochester, New York, for a copy of their new catalogue which they will find to be the most interesting reading of any catalogue of recent years on account of the new features which I have tried to digest in a few words and also because of others such as the Homocentric lens, which is manufactured by Ross & Company, Limited, London, which is placed on the market by this firm. In accessories the new features include a new tripod, and altogether the catalogue is an interesting one.

F. DUNDAS TODD.

LYONS, IOWA, December 11, 1902.
F. Dundas Todd, Chicago, Illinois:

MY DEAR SIR,— In renewing my subscription to THE PHOTO-BEACON for 1903 I want to say to you that I can not tell you how much pleasure as well as information I have gotten out of it, and I have taken great pleasure in recommending it to my friends.

Yours truly,
F. P. BATCHELDER.

THE L'EFFORT SOCIETY OF PHOTOGRAPHIC ART, Brussels, Belgium, announces that the third international salon will open on June 20. Full particulars will be had on application to the committee, 39 Rue des Ursulines, Brussels, Belgium.

EDITORIAL TABLE.

FROM F. J. DRAKE & CO., 356 Dearborn street, Chicago, we have received a copy of "Picturemaking for Pleasure and Profit," by T. Stith Baldwin, which is a very complete guide to the art of photography. It is published at $1.25.

WE are in receipt of a very comprehensive catalogue of photo supplies, issued by Hirsch & Kaiser, San Francisco, California. It consists of almost one hundred pages, and is fully illustrated. Pacific coast photographers can obtain copies upon request.

FROM THE BAKER & TAYLOR CO., 33 East Seventeenth street, Union Square, New York, comes a book that will prove very interesting to every one interested in photography. It is entitled "Pictorial Composition and the Practical Judgment of Pictures," by H. R. Poor. It is just the kind of book that sixteen years ago we hunted for in more than a dozen first-class bookstores and studied catalogues and spent about $25 in money trying to secure and failed. Now art is being brought down to the street, and reasons why are being given for the benefit of the average individual, and this book is a very excellent example of the kind and one which we feel cerain will be welcomed by every one who is fond of pictures.

The Century Camera Company, Rochester, New York, has forwarded to us a copy of its new catalogue, which treats of its new instruments for this season's trade. It has a new feature which will prove very interesting to all camera users, this being that it illustrates the construction details of every part of each instrument and shows how a camera is built up and the reason why a particular form has been used in certain of the parts. Altogether, this is a very readable part of the catalogue. There is nothing surprisingly new in the forms and styles of the work, but there are many improvements in minor details which are evidently the outcome of very considerable thinking and ingenuity, and altogether the average amateur will be glad to secure this catalogue, which will be sent free on receipt of request.

From The Eastman Kodak Company, Rochester, New York, we are in receipt of a very handsome publication, entitled "The Kodak Portfolio," which measures 9½ inches by 12 and contains almost four dozen reproductions of the winning pictures in the recent kodak progress competition. These vary in size from the Brownie picture up to illustrations 6 by 9 inches, and altogether the collection is a very interesting one which almost everybody will be glad to have. A copy will be sent by the publishers, The Eastman Kodak Company, on receipt of 10 cents in stamps to pay postage. It is unquestionably a great big bargain at the price. The "get-up" of the portfolio is rather dainty, the color scheme of the cover being especially attractive and showing how an artistic eye can produce a beautiful harmony in different tones of one color.

From Duckworth & Co., 3 Henrietta street, Covent Garden, London, England, we are in receipt of a copy of "Tom Wedgwood, the first photographer," which is an account of the life of this very interesting man, written by R. B. Litchfield as a labor of love in order to place Wedgwood in the niche of fame he deserves to occupy in the photographic gallery of immortals. It is with regret we learn that the author died just as the book was going through the press, but his kindness insured all photographic editors receiving a copy of his book. Tom Wedgwood's connection with photography may be summed up very briefly thus: In 1802, that is long before Talbot and Daguerre had published their processes, he and Sir Humphrey Davy published their method of copying paintings, etc., by means of the action of light upon nitrate of silver. Paintings on glass were copied by placing white paper or white leather, sensitized with this salt, behind the painting, and exposing the arrangement to solar light. Muriate of silver was found to be more sensitive than the nitrate, and both were more readily acted on when moist than when dry. These pictures could not be fixed. To the days of Talbot and Daguerre who were able to fix their images, the journey is a long one, but there is no proof that their experiments were a continuation of those of Wedgwood. The greater part of the book is devoted to the close intimacy between Wedgwood and Coleridge, and is very interesting reading. The appendices dealing with the work of Schulze and Charles are historically very interesting.

THE PHOTO-BEACON.

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Negative by John Chislett, Indianapolis, Ind.

FIRST PRIZE.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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PICTORIAL PHOTOGRAPHY AT THE WORLD'S FAIR.

On another page there is printed some correspondence, addressed by Mr. Strauss to the editor of *Camera Work,* which deals with a very serious subject, and which would be very amusing if it were not so serious.

The proper recognition of pictorial photography at the Louisiana Exposition is something that is very near and dear to every enthusiastic photographer in the world, whether amateur or professional, but is especially interesting to the former, because the latter is very largely handicapped by the commercial phase of his business, being compelled to supply to his customers what they want, whereas the former may follow his artistic bent without restraint. Any recognition of the best phase of photography, therefore, at the World's Fair is at once beneficial to the amateur photographer, and may possibly be a little detrimental to the professional, and it says a great deal for the broad-minded, liberal spirit of professionals, as a whole, that the active part of securing the proper recognition of pictorial photography at this exposition was taken by them as a body, and especially through three members of the profession who have been especially successful on purely business lines. It is very amusing, therefore, to find a select coterie who deem themselves to be " the whole thing " in art photography in this country deciding that, because the arrangements are not according to their ideals, they shall do everything in their power to queer the whole proposition. So anxious are they to attain this despicable end that they did not hesitate to misstate facts in their arguments. For instance, they speak about Mr. Strauss presuming to act as spokesman for the photographic pictorialists, and his statement of facts proves that he did not do any such thing, but simply obeyed the behests of the National Association of America, who commissioned him, both on account of his ability and of his proximity to the exposition, to take charge of the work, and, while the whole world is congratulating him and his colleagues on the successful termination of his labors, this little coterie proceeded to throw things at him.

The people in this world are a good deal like a card system, and every now and then they can be arranged into new combinations for proper classification. In one arrangement we will find people classified under two headings. The smaller group consists of those who do things, and the other is composed of those who sit around and tell how they ought to have been done differently. Mr. Strauss is one of the few men in this world who does things. Now he is being told how they ought to have been done.

Another classification of the human race is possible. Those who talk their opinions and are never contradicted, and those who are sometimes contradicted. We all know the former, and it is needless to specify them too particularly, but it goes without saying that if any man be allowed to air his views so many times a week for a period of years and is never once called in question, he can not be blamed if it gradually grows upon him that he is a very wise individual and whatever he says is just so. For a long time a little crowd in the East asserted that their ideals in pictorial photography were right, and, no doubt, they honestly believed it; but, unfortunately for them, nobody contradicted them until about a couple of years ago, and very naturally they came to be of opinion that they were "it." The moment they met opposition they raised a howl of indignation and refused to play unless they were permitted to formulate the rules of the game. Nay, more, they endeavored to go out of their way to spoil the game played by other people, because it is not run according to their little edition of Hoyle, and this action of theirs, in reference to the Louisiana Exposition, is another example in point.

All this is but another illustration of how amusing life is if it were not so serious to some individuals. If it were not for the attacks made upon Mr. Strauss' character this little "tempest in a teapot" could have been safely ignored, because the great mass of pictorial workers in America and the world will march along without reference to the disgruntled crowd who are sneering by the wayside, but, fortunately, when the world's work has to be done the doers invariably do and very rarely pay heed to those afflicted with indigestion. F. Dundas Todd.

HELP! HELP!

It is an established fact that every movement having for its object the elevation and betterment of the people, either as a class or in general, is conceived, organized and fostered by a few enthusiastic individuals, whose enthusiasm is born of an intense realization of present needs.

In every instance these individuals are the thinking people, and I would urgently ask those members of the photographic fraternity, who do not recognize in the conventions of the Photographic Association of America a need to the craft as a means of giving to every member incalculable assistance otherwise unobtainable, to stop with me for a moment and *think.*

Art, science, literature, and, in fact, all mental achievements, are evolutionary, each generation adding to the structures builded by its predecessors. Were this not true — were each individual student compelled to start at the beginning and wrestle alone with first principles, the end of a long life's work would show but little progress.

This, my fellow craftsmen, to a limited degree, is your situation, for no man is capable of evolving within a goodly lifetime scarce a fractional part of the remarkable phases of pictorial photography that will be shown in the superb exhibit of work at our next convention, which, with the presentation of important, pertinent subjects by able and entertaining authorities, and a brilliant interchange of ideas on the part of wide-awake, ambitious students of the art, will give you food for thought, a fund of information and a surcharge of enthusiasm that would last you through the year, the effect of which, on your business, could not be else than most salutary, for were you to show me a man interested in his business to the point of real enthusiasm, it would almost certainly be one who was making it a financial success, for enthusiasm and success usually go together.

I have made no mention of the entertainment side of the trip, aside from the pleasures of the convention proper. I would briefly add that this feature of the affair will be in the hands of those who are princes at entertaining, and you will have an abundant chance to enjoy keenly every moment of the time.

I, therefore, appeal to you in the name of the craft, to come to our aid, and "help" us in our commendable efforts to elevate the photographic art of America, and to better the condition of the photographic fraternity, promising you that by thus "helping" us none would be more greatly "helped" than yourself.

Yours for fun and other things,

J. E. Giffin.

COMPETITION NO. 59.

Snow pictures are always interesting and therefore very popular with amateur photographers. I have long held the opinion that it was easier to make a fine picture of a snow scene than of any other subject, and it took me quite a number of years to evolve the reason why, but one day last winter I sat at my window and for more than an hour I studied the snow effects outside and cogitated as to the reasons why snow pictures were so satisfactory, and at last I think I found it. In my opinion, it is because of the uniformity of color that pervades the landscape, and it is therefore comparatively easy to get fine tone quality, especially when trees and buildings are not present in the picture. When these are in evidence, however, the subject becomes a more difficult one because of the wide range of tone between sunlit snow and dark tree trunks in shadow.

The judges made the following awards:

First prize — John Chislett, Crown Hill, Indianapolis, Indiana.

Second prize — J. H. Forsyth, Jr., 2371 West Ontario street, Chicago.

Third prize — A. A. Gleason, 40 Ambrose street, Rochester, New York.

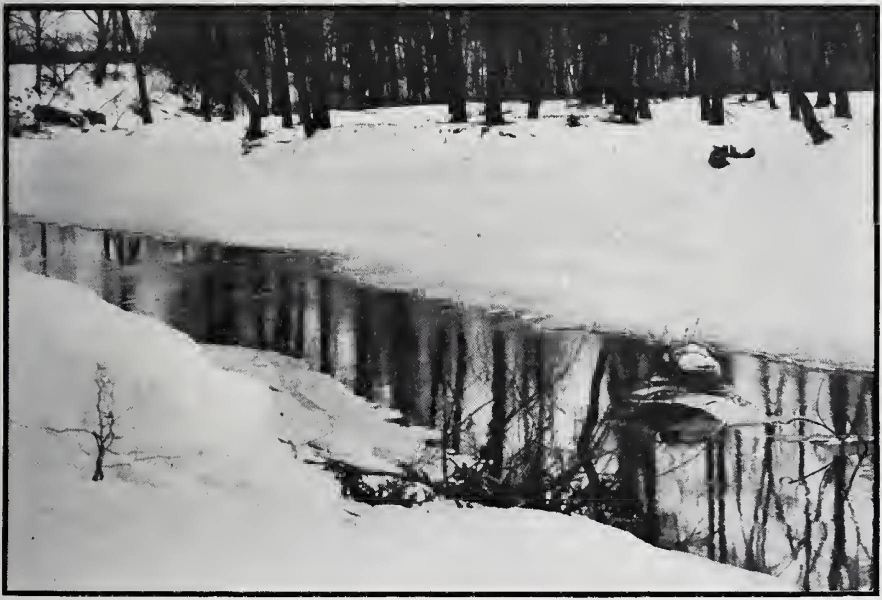
SPECIAL HONORABLE MENTION.

W. H. Porterfield, J. H. Field (3), C. E. Soderstrom, X. Y. Z., Gus Horlin, J. E. Keller.

PARTICULARS OF WINNING PICTURES.

First prize — Regarding this Mr. Chislett, in reply to a query, says:

> Your reply of 2d just received. I am much delighted at winning first prize in the snow competition and especially with Print No. 4. It has taken me a year to get this picture just as I wanted it, and it is one of my favorites. The particulars are as follows: Taken January 9, 1903, at 11:00 A.M.; sun shining dimly through clouds; stop, 16; exposure, four seconds, through Burke & James Ishcrom color screen; Cramer Instantaneous Isochromatic plate; Goerz No. 6 lens, of 12-inch focus; developed with a weak Ortol solution, care being taken not to carry the plate too far, and printed on Willis & Clements platinotype paper. Thanking you, I am,
>
> Yours very truly,
>
> JOHN CHISLETT.



Negative by J. H. Forsyth, Jr., Chicago.

SECOND PRIZE.

Second prize — Made on Cramer instantaneous iso about 3 P.M., smallest stop, exposure one-half second, printed on Willis & Clements platinotype-paper.

Third prize — Made on Eastman film, stop F. 18, exposure one second, printed on Eastman's platinum-paper.

FUTURE COMPETITIONS.

Competition No. 61 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 62 — Domestic animals. Closes June 30.

Competition No. 63 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 64 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

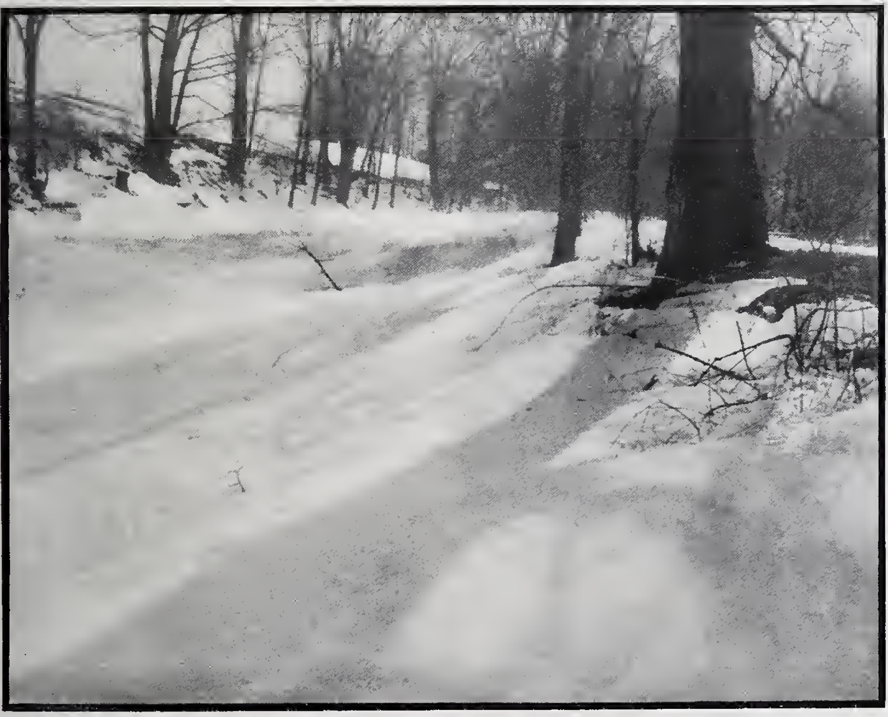
CRITICISMS OF THE WINNING PICTURES.

If my readers will turn back to the January number they will find that Mr. Chislett, in the first-prize picture of that month, carried out very much the same idea that is a predominant note in the first-prize picture of this month. Trees seem to appeal to him, which is very natural when one considers his profession, which is largely concerned with the care of trees and flowers, and he seems to render them as if he loved them. In the other prize pictures, while trees are present, they are black silhouettes, merely objects in the landscape, but to Mr. Chislett they are living things whose every detail are familiar to him, and therefore he is at pains to render the fine quality of the bark that shows the character of the tree with as much care as if he were making a portrait of a human being.

Again, we feel a tendency in this picture to go upward. The work is beautiful and interesting. This is a secluded nook, but not lonely, because the tracks in the snow tell us that teams come here occasionally and our eyes by means of the ruts lead on to some place beyond which is vaguely defined. It may be a big city or a little village; whatever it is, it is left entirely to our imagination. Snow is very white, but Mr. Chislett realizes how precious pure white is, and there is practically none of it in his picture, neither is there an absolute black, but everywhere there revels fine half-tones. This is no gloomy conception of winter, but the picture suggests a day when one would simply be charmed to be out of doors wandering at will among the snow, noting what points of interest there are in such a scene. To the eye that can not see there is nothing, but to the seeing eye there is something everywhere, and so the picture is a temptation to go out into the woods on such a day as this.

The composition is very simple in character. The horizon line is placed very low, being little more than one-third of the distance from the bottom margin. The sky and ground are linked together many times by means of the tree trunks. The upper portion of the picture is broken up into a vast variety of spaces by the beautiful tracery of the branches, while the lower portion is divided into two unequal parts by the roadway, and into many smaller subdivisions by the trunks of the trees.

The second-prize picture is one that is very interesting, because it shows a great tendency on the part of the maker to fall into a rut. In a previous competition he scored a prize with such an arrangement as this, and in the Chicago Salon two pictures by him were hung, both of which had the same general plan of composition. The salient features of the arrangement — and these, by the way, are good — are the brook running diagonally, with banks on each side and trunks of trees beyond. The lower division is diversified or broken up by means of the small trees and branches, the water by the reflections of the trees above, while the latter have clumps of light showing through them, giving great variety. The idea is good, but it does not pay for any person to play the variations of the same tune too long.



Negative by A. A. Gleason, Rochester, N. Y.

THIRD PRIZE.

In the third-prize picture we have a very commonplace subject made beautiful by judicious selection of the time of day when it was photographed, so that the shadows from the trees broke up an uninteresting foreground into a number of varied spaces. Particular attention should be given to the shadow of the big tree, because it plays a very important part in the composition. Primarily the picture space is divided into two parts, consisting of foreground and distant trees, the former, as I have just said, being broken up by shadows from the trees in the middle distance, while the latter is subdivided into three or four smaller portions by the clumping of the foliage.

F. DUNDAS TODD.

COMBINING SEVERAL NEGATIVES, OR PARTS THEREOF, IN ONE PICTURE.

Formerly, when making 18 by 24 prints for exhibition, and my landscape negative not having the clouds I could have wished it to have — such is nearly always the case — I would make two enlarged negatives, and print them in succession, fitting the one to another in time-honored fashion, but after a while I realized that hazard entered so largely into the performance that my conscience pricked me as to whether venturing one's reputation for picture-making on a sort of one to a hundred chance was a strictly moral course in these days when gambling is not so generally recognized as the occupation of a gentleman as it was a couple of centuries ago. Moreover, each print 18 by 24 spoiled because the clouds slightly overlapped the sky-line, or fell short by the sixteenth part of an inch and left a white line of separation, meant a whole sheet of platinotype paper. The Platinotype Company moved into larger premises, and prospered greatly; it may only have been a coincidence, but the thought that my consumption must have largely contributed thereto arrested my extravagance. Now, the longer one journeys in the way of cameras and plates and printing processes, it appears that the man becomes gradually either less photographic in his methods, and acquires greater fame as a pictorialist, or else by greater practice and the acquirement of a taste for niceness and exactitude, he becomes a finer craftsman, delights in the perfection of his mechanical work, and gloats over the prettiness of his negatives. Meanwhile, his imagination is very likely to become moribund, and his artistic education neglected.

I sometimes think this last case will be my own, and in time I may have acquired a facility with negatives akin to sleight of hand. Meanwhile, the "Gummers" and "Ozotypers" will have passed on, and mounted their respective pedestals provided by general popularity, while, still wrestling with platinotype and carbon, I shall yet be in the outer courts.

I fancy pictorial workers will for the most part agree with me that, for the production of a picture, the less elaborate the apparatus, the less involved the process, the better. One instinctively yearns for the directness and spontaneousness of the artist's method, who no sooner sees what he admires, or no sooner conceives some beautiful idea, than he can set it down with pencil or brush. Not so the photographer, who must expose, develop, perform numerous after-processes, then print or enlarge, only perhaps to find that his result is such that he must go back to the commencement, and go through the whole performance again. Little wonder if after this the chief delight in the idea has evaporated, and all spontaneity disappeared from the face of the result.

For this reason I have on several occasions advocated the abolition of the printing-frame, and the substitution of a drawing board, by which means one can get into more immediate touch with the partially finished print, can examine the whole of it at one time, and plan and plot any modifications to be made.

This method of printing on a drawing board, without the worry of springs or screws, not turned upside down as when filling a printing-frame, I have described in my little book, "Practical Pictorial Photography," part 1, page 84 *et seq.*, so I shall say no more about it here.

Now, with all the exactness of registration which I have tried to show this drawing-board method provides, so that a cloud negative might be printed into the most intricate sky-line, there will come to every printer whose heart is in his work, and is not content to accept the purely photographic rendering of a scene, a desire to further dodge and shade the print so as to get emphasis here and suppression there, and it is in this way that prints become overdone or underdone, and the properly fastidious judgment rejects sheet after sheet with such ruinous results as I have hinted at.

Upon due consideration, therefore, I

determined to get all onto the one enlarged negative, to do all the modifications or alterations before printing, so that printing might be all but purely mechanical; then duplicate prints could be made with some degree of certainty, time saved, and economy of material practiced.

Ever since I walked blindfold into the place where the endeavor to use photography for the fulfilment of artistic ideas is forever defeated by the unsuitability of the process of one's own clumsiness, where high hopes are as often as conceived followed by disappointment, and wise determination to desist from such vain attempts is shattered by still more giddy aspirations — ever since I have tried to use photography artistically, I have felt the necessity of being free to intrude my own judgment where the physical forces involved in photography yielded me something I should have preferred otherwise, and not only have I felt that if I make pictures their rightness and wrongness must be determined by me, and not by the machine, so also I insist upon the freedom to exercise any interference which may carry out my ideas.

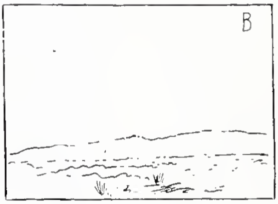
If necessary, I must be free to import in my landscape objects which seem to me desirable; if necessary, I must be allowed to produce a shadow or a slightly lower tone in some portion. I must be at liberty to lighten the tone here or deepen it there, accentuate some tree trunk or tuft of rushes, and do all such things as will better render the scene as I imagine it, or as it impressed me, the limit to such interference being the obvious violation of natural law and the condition of things that might have been. Now, as a matter of fact, I have never yet seen what I may call a nature photograph which I did not feel would be improved by this or that alteration, and this is, in my opinion, as it should be, for if one sets out to produce a work of art one must be capable of always imagining something better than nature; better, that is to say, from the standpoint of our human temperament. Upon the bit of nature caught and brought home wild, we make the thing we call art, with all the best of its beauty retained, chastened and refined, just as lavender water retains all the sweetness and character of the perfume of the flower, with a certain coarseness removed. Most photographers are nature lovers, and this interference with her exact transcript may seem like sacrilege until the notion is clearly held that nature is one thing and a picture another, the latter being a pretty fiction, a suggestive poem founded on facts derived from the former.

A. W. Engel, Chicago Salon.

ENJOYING A SPRING DAY.

The numerous stages through which a photograph must pass before reaching the final picture offer so many opportunities of restraining or correct-ing the mechanically formed image, that on thinking the matter over, I discerned that the earlier in the process the combination of various negatives and modification in shades is made the greater opportunity there will be for correction of errors or further modification in subsequent stages.

Those who have acquired some skill in enlarging onto bromid paper, first the landscape, and then vignetting in the cloud, might elect to do the same in making an enlarged negative, whether a glass plate or negative paper be used, but that error means the sacrifice of a plate costing perhaps several shillings, or, if correctly done, it is the final stage before printing, and the only chance, therefore, of modification.



It may be argued that alterations, "retouching" or working, may be put onto the two little transparencies from which we are enlarging, but this is not so well done *before* the two are combined, because the more carefully thought-out alterations require that the complete combination be viewed, and nothing left to chance, nor yet to a calculation of how things should or may come. Some people are very clever at printing clouds with landscapes in lantern slides, either first exposing on the latter and then marking it while the clouds are printed, or else printing each on separate slides, and putting them together, each forming the cover-glass to the other. Generally, however, the critical person can detect an indication of the join, which in a lantern slide, which is only shown for a minute or two at a time, is not so important as in a picture which remains permanently to please or to vex. Moreover, we may want to combine three or four negatives, and some of them may have interlacing parts and intricacies, and we ought to have a method that will suit all cases, and not be applicable to easy ones only.

As I am about to describe my own procedure on the chance that it may interest some others, I may say that I usually employ a 6½ by 8½ camera in the field, and in the present case I am assuming the use of 6½ by 8½ negatives.

First, a landscape A in the River Lea valley, with a rather abrupt sky-line.

Second, another landscape B in the same neighborhood, with a distant wooded hill, which I desired to introduce into "A."

Third, a cloud negative C.

I propose to combine these three by printing in contact with slow negative, or a transparency plate, and so get a glass positive.

First, examine the three negatives for "pinholes," etc., and make them as "technically perfect" as possible.

Next observe that in A negative the group of trees comes rather close to the top of the plate. This was done designedly, for, in the first place, it enabled me to include some beautiful foreground material such as I love so well, and, secondly, I intended printing in clouds to beyond the dimensions of the 6½ by 8½ plate, so as to make a larger and squarer picture. Negative "A" having been taken on an isochromatic plate, with a yellow screen, on a blue-sky afternoon, the sky portion was semi-transparent, and would have printed through. The sky must be blocked out so as to print white. This will be referred to later.

FIRST STAGE.

Now take negatives A and B, placing one behind the other, and determine where the hills of B are to come; hold the negatives together, and as their top and bottom edges do not coincide (the SIDES *must* coincide), attach to *the film side* B, with gum, a piece of nonactinic paper to exactly make up the deficiency at the bottom. This may be gathered from reference to Fig. 1 and Fig. 4, to be described presently. I am not very hopeful of making this matter quite clear to all, but shall probably do so better by some diagrams.

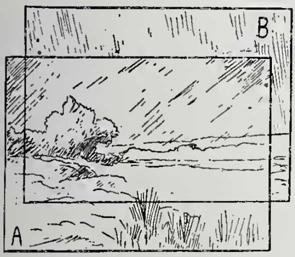


FIG. 1.

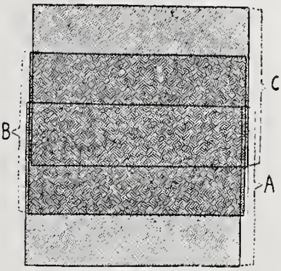


FIG. 2.

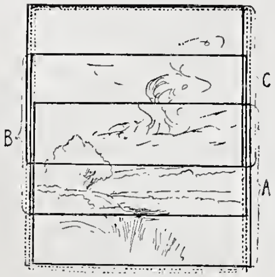


FIG. 3.

Let A, B and C be the three 6½ by 8½ *negatives* to be combined, and let it be understood that the combined contact negative or print is to be 8 inches from left to right — that is the full length of the plate — and about 9 or 10 inches from top to bottom. That is to say, in Fig. 2 the relative position of the three components is shown — the cloud negative C not only fills the sky portion of A, but adds further cloud area.

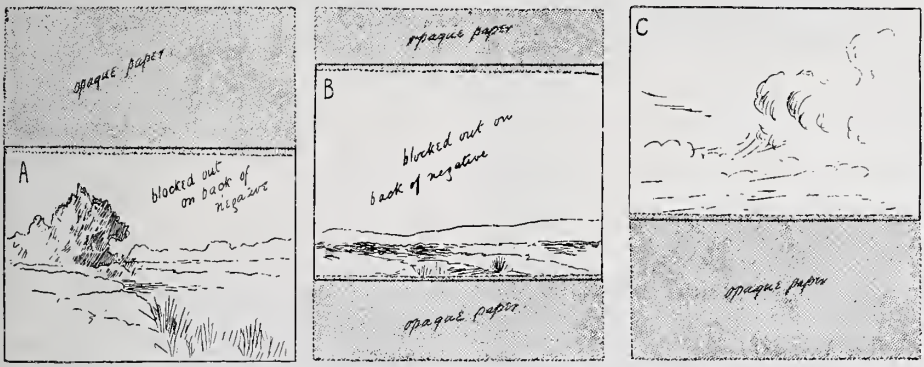

opaque paper
A
blocked out on back of negative
opaque paper
B
blocked out on back of negative
opaque paper
C
opaque paper

FIG. 4.

Next, while holding A and B together, determine where C should come by placing it behind the others and looking through them to the light (Fig. 3). Now attach to the top of A, and *on the film side,* sufficient opaque or nonactinic paper to reach exactly to the top of C; to B, which has already paper covering to the bottom of A, attach paper to reach to top of C; also attach to the bottom of C, on the film side, paper to cover to the bottom of A. In Fig. 3 the paper is indicated by dotted line. We now have Fig. 4, showing A, B and C with their papers attached. We will call this the end of stage the first.

SECOND STAGE.

We may now conveniently proceed to block out the too transparent sky portions of A and B, and by far the most convenient way of doing this will be by first covering each negative on the back with tracing-paper.

Take a piece of very transparent tracing paper, as grainless as possible, and wet it thoroughly, next pass round the edge of the glass side or back of the negative a camel-hair brush dipped in fish glue; then, having blotted off superfluous water from the tracing-paper, lay the negative glass-side down upon it, lift the negative up again, and the tracing-paper will have adhered thereto. See that it has caught all round, and although it may be all wrinkles and creases, as soon as it is quite dry it will be as smooth and tight as a drumhead. When dry place the paper-backed negative in a retouching desk, or hold it against a good light, and follow the sky-line with a B.B. lead-pencil, and with this begin to make the sky portion opaque. When this has been done all along the sky-line the remaining area to be covered can be more quickly done with a brush and opaque pigment or with powdered crayon. The pencil will enable us to follow the intricate sky-line with a nicety, and to also block out any little lights where the sky is seen through the branches, etc. Having attended to the sky, opportunity may here be taken to heighten any high lights or deepen any shadows in the landscape our judgment may direct, working on the tracing paper with a pencil or crayon, or painting on the shadows a little Canada balsam dissolved in turpentine, which will add translucence to the tracing-paper, and, of course, make that portion print darker. How much modification of this kind should be done, and how much time be expended thereon, is an entirely personal matter, and I shall leave it to the taste and judgment of my reader.

No blocking out will be required on the cloud negative "C," as the opaque paper will have been attached so that it may come just below the landscape sky-line when they come to be printed together anon.

This backing, blocking out and working on the negative A and B can hardly be called part of the method of combination printing I am trying to describe. We proceed, therefore, with the second stage, which consists of making on a 10 by 12 plate a positive transparency from A, and another contact transparency on a 10 by 12 plate from B and C together, and these transparencies are to be made in such a way that subsequently exact registration of the two can be relied on.

A 12 by 15 printing-frame or larger will be required, with a plate-glass front. Let Fig. 5 represent the printing-frame, with the back removed. The following procedure is to be conducted in the dark-room: Into the top left-hand corner place negative A, film side up as ordinarily for printing, and see that the corner of the negative exactly fits into and touches the angle of the frame. This is most important. Next lay upon it a 10 by 12 plate, film side down, in the usual way, being careful that this likewise exactly fits into the angle of the frame. The opaque paper attached to A covers that portion of the 10 by 12 plate which is to be occupied later with a cloud. Close the frame and expose fully to gas or candle light. Remove and develop so as to get a very dense image. The result will be a positive of A, which is to serve later as a mask. So we will call it mask A. Set this on one side to dry, and proceed next with the negatives B and C.

Place negative A in the same position as when making mask A, and repeat exactly the operation of printing, but on another 10 by 12 plate, then remove negative A and substitute negative B, taking care that by means of the attached paper it is in the right position relatively to the latent image printed from negative A. Expose and develop for density, and dry. This is mask B. Where the distant hills of negative B fall upon the tree of negative A, the image of the one will overlap the other. This will be of no consequence, as it is only required as a mask.

As these transparencies called mask A and mask B are to serve as masks, it may be necessary to paint over the image with some opaque varnish or quick-drying pigment, but if developed very dense this painting need not be carried to the extreme edge. The utmost care must be exercised not to go beyond the sky-line and encroach in any way upon the clear glass which is where the clouds are to be, but the lower part of mask B should be covered with opaque paper. Fig. 7 shows masks A and B, the solid black edge on two sides being that portion of the 10 by 12 plate which is to spare. The making of these masks we will call the end of stage the second.

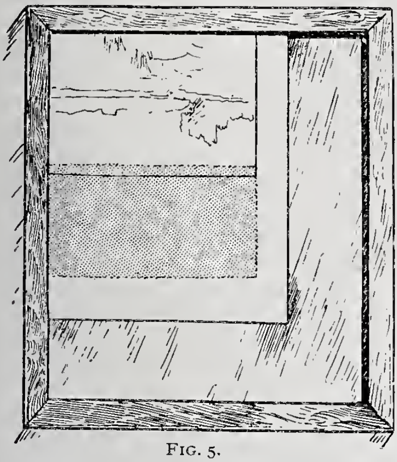


FIG. 5.

THIRD AND FINAL STAGE.

Take negative A and proceed exactly as when making mask A, namely, fitting the negative into the top left-hand corner of the printing-frame, and exposing on a 10 by 12 plate. Call this the final product or plate. On removing this, substitute for negative A the mask A, but *film side down.* On this lay negative B, film side up in the usual way, and on it lay the final product (the 10 by 12 plate just exposed on and removed), the paper at the bottom exactly fitting the corner of the frame, thus bringing the distant hills into the position which was ascertained and determined upon in stage first. Expose to light for what you consider to be the correct time, taking care that the light is directly opposite and central with the frame.

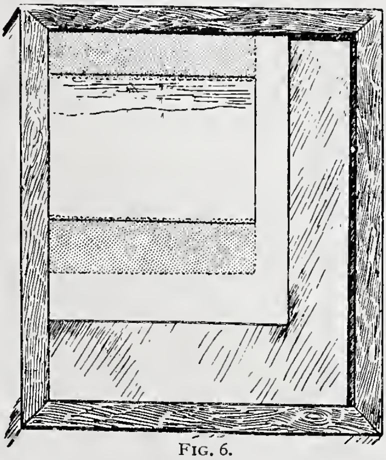
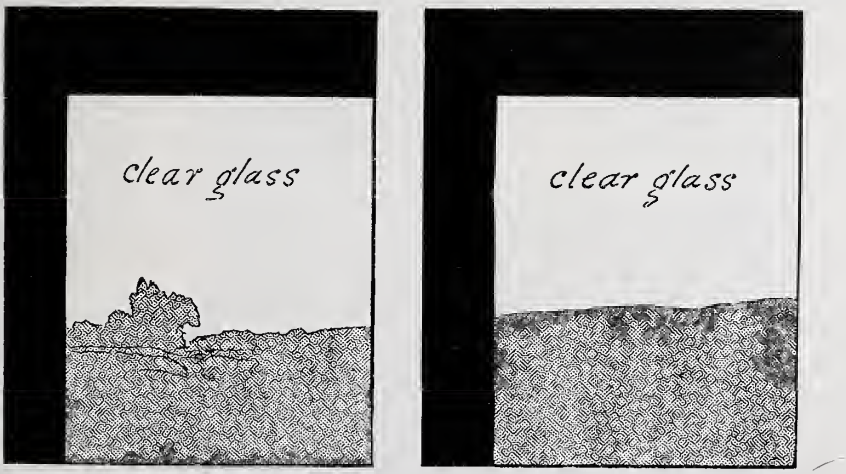


FIG. 6.



Mask A. Mask B.

FIG. 7.

The mask A is protecting the image

already printed (but not developed) from negative A, and the opaque paper and blocked-out sky of negative B is again protecting what will become clouds in this the final product. Remove negative B and mask A, introduce mask B, film side down (this will coincide with and cover the latent image just printed by negative B), put into position negative C, being careful that its paper attachment exactly fits into the corner of the printing-frame, replace the final negative, and expose. This time the sky portion, which has been protected by the blocked-out sky and paper attachment of both negatives A and B in succession, will be printed into, the mask B, with its clear glass upper part permitting the light to gain access to it, but protecting the previously printed landscape parts to the tiniest detail. Next, the 10 by 12 plate or final negative is developed, and, if all has been carried out exactly without trusting to guess, or to skill, but just relying on mechanical registration of all the several parts which have been made to fit with equal exactness the corner of the printing-frame, we should have the desired result. The final negative may now be backed with tracing-paper as its forebears were backed, and just such modification carried on as may be thought advisable, deepening shadows, or introducing high lights.

I have on occasion made a contact transparency from the final negative in order to put some work thereon not so easily done on the negative, and then if a platinotype, gum or carbon print be in view, an enlarged negative is made.

But then the enlarged negative becomes like an engraver's plate, a thing the printing from which is a mechanical certainty.

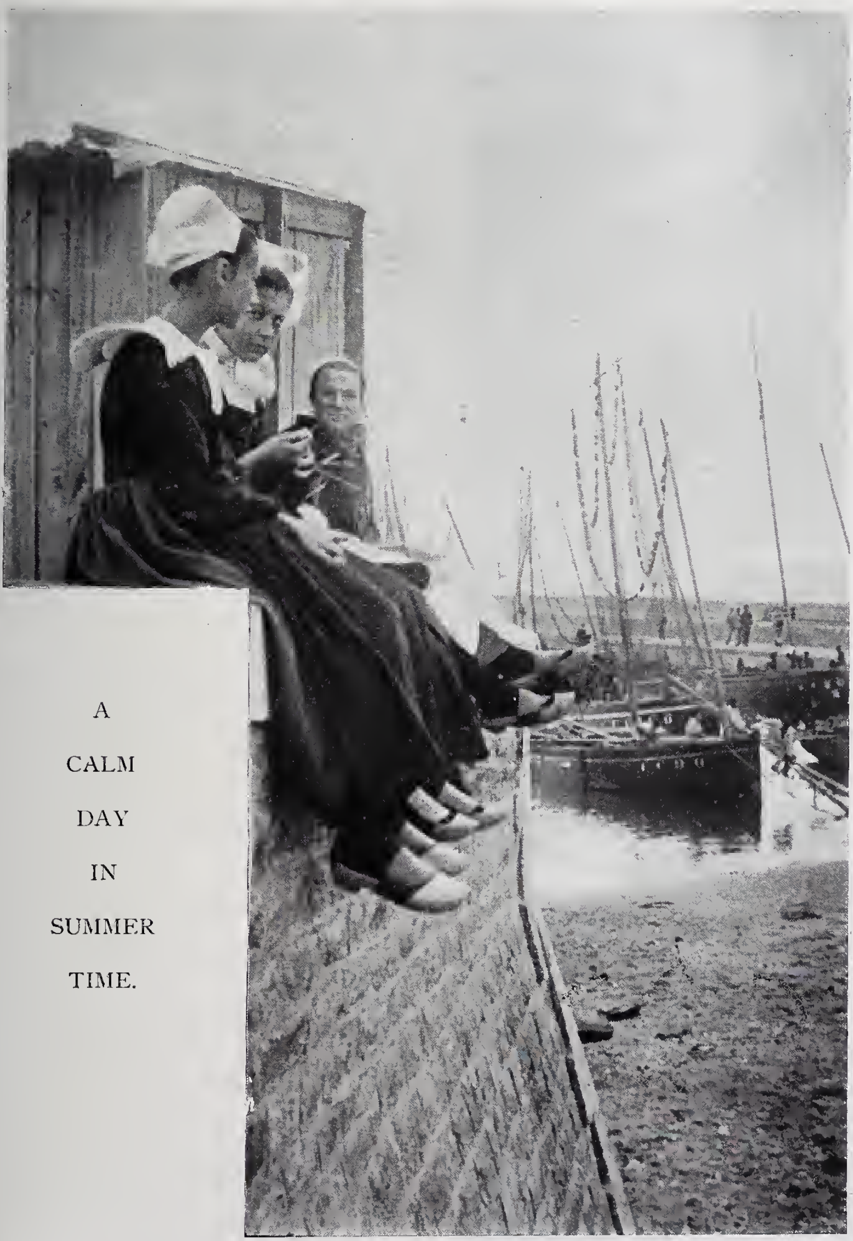
The foregoing has taken some time in telling, but that is because of the difficulty I have felt in making each stage clear. One might demonstrate the same in half the time, and even now I am not sure that I have made it appear as simple as it really is.

The advantage of glass masks, that is, having transparent positives as masks, is that the most minute detail and most intricate outline can be faultlessly covered or masked, and as in this instance a picture being sought larger than the original whole-plate, the additional area being alternately covered, and then (which is more important) exposed by an unbroken sheet of glass, there is no joining to be undertaken, and, despite variations of this method having been suggested to me, and what it is alleged are quicker and simpler methods, I find nothing to suit me better, and that 10 by 12 combined negative, with all its various components truly fitted and set, is a great joy. You know then all the risky working, joining, masking, shading is done, and thenceforward the production of the picture could almost be relegated to another.

It should be noted that we have employed three 10 by 12 plates, two for masks and one for the final, which, compared with the waste of large sheets of paper, is a very much smaller matter.—*The Amateur Photographer.*

Very frequently readers drop in a note to inquire as to the whereabouts of Mr. James Inglis, wanting to know if he is still interested in the enlarging business in Chicago. Mr. Inglis is now located in Toronto, Canada, having returned to the scene of his first successes in photography, and is pushing "At Home" portraiture by daylight and flashlight. His son, W. J. Inglis, who was with him in the enlarging business for fifteen years, is now president of the W. J. Inglis Company, 1068 East Sixty-first street, Chicago, whose advertisement will be found elsewhere in this issue.

A very interesting decision has recently been made in the English courts regarding the use of the word kodak, brownie, bull's eye and similar titles which it has been decided are trademark terms and are applicable only by the various kodak firms in England. In the opinion of other manufacturers the titles were considered to determine sizes of instruments and that such a term as bull's-eye film meant any film that could be used with the bull's-eye instrument, but the courts have decided that a film to be used under that title must be manufactured by the Kodak Company, so that any traveler abroad who asks for a kodak, brownie or bull's-eye film will be supplied with a film manufactured by the Kodak Company.



A CALM DAY IN SUMMER TIME.

R. Demachy.

Courtesy of the *Bulletin du Photo-Club de Paris.*

SEEING THROUGH DIFFERENT SPECTACLES.

St. Louis, April 9, 1903.

To the Editor of The Photo-Beacon:

My Dear Sir,— In the first number of *Camera Work,* page 37, is a comment on "Pictorial Photography; The St. Louis Exhibition," over the signature, Editor (Alfred Stieglitz). In part, this comment reads: "Pictorial photography having at last won recognition in recent European art exhibitions, the managers of the St. Louis exhibition have awakened to the fact that they could no longer ignore its claims; although, *until Mr. Caffin, the art critic and editor of the American section of the International Studio, took up the cudgels for the cause, the authorities in St. Louis seemed bent upon following the old, narrow path.* Nor were they entirely unjustified in their conservatism in view of . . . . *the more than extravagant demands made by Mr. Julius C. Strauss,* . . . . *who presumed to act as spokesman for the photographic pictorialists,* . . . . but his (Strauss') connection with the modern pictorial movement *has hardly been such as to have given him the knowledge and experience necessary to impress the authorities with the history and consequent rights of photography as a fine art.*"

I have italicised the portions of this comment to which I take exception. My reasons for challenging the statements are: (1) The St. Louis exposition authorities had decided upon allowing a Salon exhibit in the Fine Arts Palace before Mr. Caffin's article in the *International Studio* appeared; (2) I did not *presume* to speak for "Photographic Pictorialists," or any other kind of camera workers, but *was one of a committee delegated* to secure recognition for photography as an art, from our World's Fair officials; (3) That the demands made by our committee, designated by Mr. Stieglitz as "*more than extravagant,*" were not so considered by our exposition authorities, nor so regarded by the photographic organizations of the world. (4) That the reflections upon my personal "*connection with the modern pictorial movement,*" etc., were intended not only as a very severe blow at me, but at all professional and nearly all amateur photographers; and (5) that the Camera Club of New York city, of which Mr. Alfred Stieglitz was at that time a prominent member and leading spirit, favored all the demands made by the committee, of which I was chairman.

I wrote Mr. Stieglitz a letter covering these points. His reply in the current number of *Camera Work,* on page 51, begs the question by saying that in his previous editorial comment, he referred only to "photographic *pictorialists,*" (the italics are his) and calls attention to the "distinction between such and photographers generally." In other words, the display at the St. Louis Universal Exposition, it seems, according to Messrs. Caffin and Stieglitz, should be confined to the work of "photographic *pictorialists,*" and they themselves should be the judges to decide which of their own productions should be displayed.

If you, Mr. Editor, feel that the professional and amateur photographers of the world, not included in Mr. Stieglitz's roster of "pictorialists," have any claims upon the attention of the public, it would be well for your journal to take up the cudgel in their behalf.

In order that you may judge of the merits or demerits of my letter to Mr. Stieglitz, I enclose a copy of same.

Very cordially yours,

J. C. Strauss.

To the Editor of Camera Work:

Dear Sir,— I am in receipt of a copy, as a subscriber, of the first issue of *Camera Work.* I am greatly surprised, that in republishing the articles with reference to photography at the World's Fair to be held in St. Louis, you found it necessary to go out of your way that you might make personal allusions which grossly misrepresent me. Your editorial comments evidence complete unfamiliarity with the history of the movement for the recognition of photography by the Exposition. Consequently, your statements are wholly erroneous.

The facts to which I will call your attention are easily verified by official documents in my possession. These are open to the inspection of any one interested in this subject. All the correspondence (excepting the suggestion to President Francis, made as far back as July, 1902) between me and the World's Fair authorities was in my capacity as chairman of the committee appointed by the then president, E. B. Core (of New York city). This committee was named by him at the National Convention of the Photographers' Association of America, held in Detroit in the early part of August, 1901. I was not present at any session of that convention, and had no influence on its actions. That body unanimously approved the idea of a separate pavilion for pictorial photography possessing art merits. Mr. S. L. Stein, of Milwaukee, and Mr. C. M. Hayes, of Detroit, were the other members of the committee. We were instructed to use every effort to secure recognition for photography from the directors of the St. Louis Exposition. Not until some months later (in January, 1902) was Colonel Ockerson appointed chief of the Department of Liberal Arts. When he, in February, 1902, took up the subject of photography, he was not familiar with the correspondence between our committee and the Committee on Fine Arts of the Exposition.

Aside from this action by the most representative body of American professional photographers, our committee was accorded the active support of equally important bodies of non-professional photographers. I will refer to these more in detail, presently. I mention the fact at this time merely to demonstrate to you that the charge made in your editorial comment, that I *presumed* to act as spokesman for photographic pictorialists, is a gross misstatement — one that should not have found space in the columns of *Camera Work,* but, having been published, will be corrected, if you are governed by a sense of justice.

I will call your attention, first, to a letter from the Camera Club, of New York city. I believe at the time this was written you honored that society with your membership. Under date of October 1, 1901, I was advised "That the Camera Club, of New York city, is heartily in accord with the plan of having built a proper building in which to exhibit photographs, so as to separate pictorial photography," etc. This letter is officially signed by the president. Next, I quote from the letters under dates, respectively, November 12, 1901, and January 31, 1902, from the secretary, Doctor Bartlett, of the photographic section of the American Institute of the city of New York. In them it was officially declared that the committee were

C. Puyo. Courtesy of the *Bulletin du Photo-Club de Paris.*

unanimously in favor of the erection of a suitable building for the express purpose of a display of art photography. Again, I have a letter from the president and the secretary of the Photographic Society, of Philadelphia, dated October 16, 1901, in which these officials were "empowered to inform you that the society regards your suggestion with favor, and desires to know in what way this society may be of service in the matter." Further, I have a letter dated October 14, 1901, from the California Camera Club. Its Board of Directors heartily endorses the plan and promises its aid in every possible way toward the practical culmination of the "idea."

From among a number of letters written by the officials of foreign photographic societies, I select one by the honorable secretary of the Royal Photographic Society. This was dated London, January 15, 1902: "I am instructed to inform you that your scheme (a separate pavilion) has the entire sympathy and approval of my council, and they hope that it will meet with the success it undoubtedly deserves. If you think we can assist you on any point connected with its organization, please command us." I will call your attention to an extract from a letter from Charles MacDonald, secretary of the Glasgow Photographic Association, under date, Glasgow, November 15, 1901: "I am pleased to see that you have hopes of getting the St. Louis World's Fair to allocate a separate section for pictorial photography on the lines indicated." Returning again to our own country, in April, 1902, the Chicago Association of Amateur Photographers unanimously adopted a preamble and set of resolutions containing, among other expressions: "Heartily endorses the demand of advanced photographers all over the world and the demand voiced by Mr. J. C. Strauss," etc.

I have quite a number of other communications, but these will suffice for the present. I repeat that these expressions, coming from the most representative photographic organizations of the world, demonstrate conclusively the injustice of your statement that I *presumed* to obtrude my individual opinion upon the officials of the World's Fair. I doubt whether it would have been possible to have received such unanimous and cordial support from the photographers of the world, amateur or professional, for any other project connected with photography. I feel that you must admit our committee did no more than voice the wishes of the representative bodies devoted to camera work.

I have the assurance of the chairman of the Committee on Fine Arts of our World's Fair that he and his colleagues were in favor of a separate building. The idea was rejected by the executive body, because of the cost of an appropriate building. By the spring of 1902 our committee took the stand that, as a separate pavilion could not be secured, we would demand space for a salon exhibit in the Fine Arts Palace. If we failed in securing this, no further effort to have a representative exhibit of advanced photography at the Exposition would be made.

As to Mr. Caffin — in all probability he never would have learned of the controversy between our exposition authorities and our committee but through my action in sending him copies of a few letters between Colonel Ockerson and myself, as chairman. Mr. Caffin makes acknowledgment of this in the opening sentence of his first article. He knew nothing whatever of the many letters which had come from photographic organizations from almost every part of the globe. He knew nothing of the correspondence with the officials of the fair during the previous year.

By the time the *International Studio,* for June, 1902, containing Mr. Caffin's first article, reached Colonel Ockerson, official circular No. 5, relating to the allotment of space in the Fine Arts Palace, had already been determined upon; so that, while Mr. Caffin's support was welcomed and sincerely appreciated, it was to some extent *post festum,* in accomplishing results.

Whether or not my connection with "the modern pictorial movement," or my "knowledge and experience with the history and consequent rights of photography as a fine art" is all that it should be, I believe it was pretty thoroughly demonstrated that those who you will concede had the advantage of connection, knowledge and experience were quite well satisfied with the results obtained by my colleagues and myself. Did it not require too much time and space, I would find much pleasure in quoting the words of commendation and appreciation which came to me from many parts of the photographic world upon the publication of the decision recognizing photography as an art. I will however, ask you to grant space so that I may give expression to some of my personal feelings and convictions with reference to the comparative worth of professional and amateur photographers. Though belonging to the former class, I am not so narrow in my opinions nor so prejudiced against the non-professional that I am unable to recognize merit in photographic portraiture, by whomever made. I have always contended and have frequently given public expression to these convictions, that many of the most telling movements into the realms of art, by photography, have been led by amateurs. In all our conferences with Colonel Ockerson, and others connected with the St. Louis Exposition, we impressed upon them the absolute necessity of securing the support of the advanced amateurs. We made the fight for the recognition of photography as an art, largely in the interest of the non-professional workers. My colleague, Mr. Stein, like myself, a professional, said to Colonel Ockerson, " Out of every ten pictures accepted for display, we know eight will be made by amateurs." We were not speaking for professionals only. Had we been, we would not have excluded ourselves from the jury of selection. Our whole contention for an exhibit along salon lines, to be passed upon by a jury of artists, was with the idea of barring the stereotyped, conventional photograph. I was opposed to photographer judges, by whom chemical effects and technical knowledge might be considered above true pictorial qualities.

I am aware that you have appeared in some journals in opposition to the appointment of artists (painters) on juries of selection. At the recent Turin exhibition the participation of artists was most satisfactory, and it seems to me the plans of judging might be equally satisfactory in St. Louis, 1904.

From the very first, throughout the long struggle for recognition by the St. Louis Fair, not one word of mine, written or spoken, had in it an iota of personal or selfish interest. My whole aim and purpose was to assist, if possible, in the uplifting of photographers to the level with those who use other media of artistic expression in recording beauty of face, or form, or of view.

It would have been impossible for you to have misrepresented me more greatly or more undeservedly than in the unjust accusations and imputations condensed in the few lines devoted to me. I repel the assertion that I *presumed* to act as spokesman, and resent the statement that I was unsupported in the demands made. Now that your attention has been called to the misstatements and misrepresentations, I expect you to make proper acknowledgment, in a manner equally as prominent as was your editorial in the *Camera Work* for January. JULIUS C. STRAUSS.

WINONA, MINN., April 17, 1903.
F. Dundas Todd, Chicago, Ill.:

DEAR SIR,—The dates for our ninth convention have been changed from August 11, 12 and 13 to August 26, 27 and 28, 1903. Please announce same in next issue of THE PHOTO-BEACON and I shall be obliged to you. Sincerely,

J. A. GUNDERSON, *Secretary.*

Courtesy of the *Bulletin du Photo-Club de Paris.*

ROCHESTER SALON.

The first annual salon of the Rochester Camera Club opened the 30th of March, at the Mechanics' Institute, in Rochester, New York. The Rochester Camera Club is quite a young organization, it being not much over a year old and counting about forty members. But what it lacks in years it makes up in enthusiasm, and the work hung at the salon speaks very well indeed for the taste and the skill of its members. It is, under the circumstances, as excellent an exhibit as could be wished for. A large space is also taken up by some of the best pictures of the photo-secessionists headed by Mr. Stieglitz, who have kindly accepted the invitation of the club to send some of their work and to help thus to render the exhibition more attractive. Mr. John E. Dumont, president of the club, himself a secessionist, and Miss Frances Benjamin Johnston, of Washington, have also contributed some of their best pictures for the occasion. As a special favor for the first exhibition held by the club, and in order to encourage its junior members, all pictures presented (the number for each member being limited to ten) were placed on exhibition.

Two prizes and a few mentions were awarded by the club, the judges being Mr. Harvey Ellis, Mr. John E. Dumont, and Mr. A. K. Boursault. The high standard of the pictures came as a gratifying surprise to all lovers of artistic photography. The pictures that won prizes were excellent, both in artistic sentiment and feeling, and in technical execution, and would attract attention even in the most exclusive salon. Amongst the remainder of the 180 pictures, representing the club's exhibition, some very good and interesting work has been done which would have merited a mention but for the lack of technic, especially noticeable in the printing. This is possibly one of the useful lessons to be derived from the Rochester exhibition. Many an amateur who may have carefully studied composition, lighting, exposure and development, loses all his advantage by forgetting that the goal of photography is not the production of a perfect negative, but of *a perfect print.* No matter what process one chooses, the print is the ultimate end of the picture, and the greatest care ought to be bestowed on it to make it a thing of beauty. It is the print that tells the story, not the negative, and this always ought to be present in the mind of the artist.

We have here no space or time to give an exhaustive review of the pictures sent to the exhibition. We regret, therefore, that we can but mention without comment the prizes and mentions awarded by the judges. The first prize went to Miss Anna Page Scott for a charming gum print, full of poetic sentiment, entitled "Sylvan Days." Mr. Edward W. Peck got the second prize with a small landscape, a kind of Corot on gum called "Monnickendam." The jury being not able, under the rules of the club, to award a third prize, gave a special mention to Mr. A. H. Gleason for an excellent and delicate picture on platinum, called "Motherhood." "Honorable mentions" were recommended for a portrait by Mr. H. H. Kingston, another portrait entitled "Mary," by Mr. Edward W. Peck; "An October Landscape," by Mr. A. H. Gleason, and "A Happy Family," by Miss Anna Page Scott.

It is but just to mention in finishing that the credit for the successful opening of this interesting salon is due entirely to the efforts of a few active members, amongst which Mr. John E. Dumont, president of the club; Mr. Taylor, Mr. Shaffer, Mr. Paddock, Mrs. Hair, Miss Scott, etc., distinguished themselves by their strenuous activity. They ought to feel well repaid now for their pains, as the result of their efforts has proven such an indisputable success.

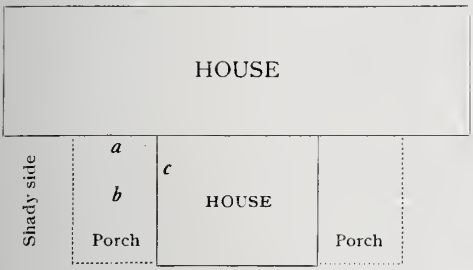
A. K. Boursault.

BAUSCH & LOMB COMPETITION.

Intending competitors should secure a copy of the booklet on this competition, issued by the firm, in which is set forth the principles that will govern the judges in making the awards. It should be remembered that the purpose of this competition is to show the photographic possibilities of high-grade lenses.

OUTDOOR PORTRAITURE.

To get the soft lighting in portraits outdoors, as shown in the baby picture I sent you lately, all that is necessary is to put up the background against the end of the porch that is closed to the light, as indicated by letter *a*, and the sitter in front of it. Then put up camera at *b*, and if the wall of the house, *c*, is white, focus, then press the bulb and you will have fine results every time, as far as the lighting is concerned. Those were the conditions under which baby was taken, with the exception that there were trees close to the house and that, may be, they softened the light a little.



If the porch happens to be open at both ends, cover one of them up with blankets, and then the background.

If the wall of the house on the shady side of the sitter is not white, borrow a white sheet and back it up; that will make the shadows transparent.

A baby in a high-chair on a porch about seven feet high, gives just the right proportion of side and top light, in my opinion, but almost any angle can be obtained by placing the sitter higher or lower.

By forming a circle about two feet in diameter of stout wire and, after twisting the two ends, fastening to a bamboo pole and then covering the circle with cheesecloth, the strongest light in summer can be toned down on the face.

For hand-camera lenses, where the focus always is short, I would not recommend larger aperture than F 16. The exposure will only be short, anyhow. For the baby I gave only one second at half-past one on a bright day in February.

By following these simple directions any owner of a camera with sufficient bellows extension can get results that will come quite close to what can be had from the average professional photographer in smaller towns, and, as far as the expression is concerned, in nine cases out of ten even better. In this connection I will give a few hints about taking of babies.

Put up the chair and focus on that, stop down the lens, and set the shutter to the required speed.

Now, tell mamma to bring baby and let her place it in the chair, but, under no circumstances, allow anybody else around.

Then let her stand behind the camera, and tell her to draw baby's attention. She will begin making faces at the little one that, before long, will bring the expression that both you and the fond mother are looking for, and as soon as it is there, press the bulb.

CHRISTIAN F. J. NISS.

IF you are interested in home amusements, you will find *The Home Bazaar* will suit you. See advertisement in this issue.

OWNERSHIP OF NEGATIVES.

The case of The Rotary Photographic Company, Limited, vs. The Taber Bas-Relief Company, Limited, which was heard before the Lord Chief Justice on March 20, will prove useful to photographers, because it raised an interesting point on the ownership of negatives and secured an important decision thereon. The case was primarily a claim for the payment of something over £160 for goods supplied, and the defense and counter-claim alleged (a) that some portion of the goods had proved immerchantable, and (b) that certain negatives, the property of the defendants, had been detained by the plaintiffs. The witnesses called for the two sides included Messrs. F. A. Bridge, E. W. Foxlee, Albert Hildesheimer, the Rev. F. C. Lambert, M.A., E. A. Robins and H. Snowden Ward, hence the photographic interest was strong. The negatives alleged to have been improperly detained included a number made by the plaintiffs for the defendants, and paid for. The plaintiffs argued that while negatives supplied to them by the defendants were returnable, those made for the defendants, by themselves, from transparencies or original objects, were specially made for their own printing process and were not deliverable to the defendants. This position was supported by Mr. Hildesheimer as one having extensive knowledge of the publishing trade, and by Mr. E. W. Foxlee as one well versed in photographic trade customs, and the judge commented upon it as a trade attitude "which seems very reasonable." The jury followed the leading of the judge and held that the plaintiffs were justified in retaining the negatives for the use of the defendants. Although such a decision may some day be reversed, it stands for the present as the leading case on the point, and is valuable to photographers because the two previous decisions (which upheld precisely the same principle) were only County Court decisions. The ownership of the negative in the case of the ordinary portrait photographer has long been settled, and the peculiar interest of the cases now mentioned lies in the facts that (a) the subjects were purely technical (shipping, architecture and negatives made from portrait positives supplied, respectively); and (b) in each case the negatives were charged and paid for as a separate item; yet their use and custody were retained to the photographer making them, and not to the employer who paid for them.

HOME ON A VISIT.

We do not believe that we are mistaken when we hint that the correspondents of the Boston house of Andrew J. Lloyd & Co. will find their correspondence much brightened up and refreshed. The chief of Lloyd's photographic department is Mr. John W. Collinson — the "J. W. C." of the letters — whom Mr. Lloyd took with him on the annual visit of the firm to Europe. It has always been Mr. Lloyd's policy to keep *en rapport* with the best English and Continental optical houses, and this same policy is now in vigorous activity.

Years ago — how many does not matter, let it go — a young British mechanic stepped off the liner, wandered up Washington street, Boston, into Lloyd's then small shop, and asked if they had a "job" for a good optical workman, and "Lloyd" said he had; never making any particular inquiry as to what this young man could do, or anything — just taking him on his "face."

Mr. Lloyd was soon aware that he had secured the services of one of the most skilful and best-known mechanics in astronomical and photographic work. So that his trip to Europe will be as an old-home week to "Jack." He will see his old friends and employers at Ross', Dallmeyer's, Taylor, Taylor & Hobson's, Troughton & Simms' (famous makers of fine instruments), and is very certain to fill his mind with desirable information as to optical progress and methods of the day.

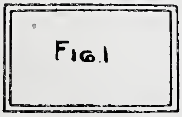
Of course, all these people who send for Lloyd's Encyclopedia and then begin to write to Lloyd to clear up some point or other are going to get some mighty interesting reading pretty soon, when the season is on. We have half a mind ourselves to pretend that we do not know everything (as we really do) about photography, simply for the sake of some of the good stuff that will be sent out this year, over the subscription:

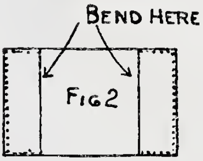
Very truly yours,
ANDREW J. LLOYD & Co.,
J. W. C.

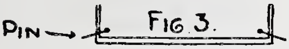
One of Mr. Lloyd's errands will be to inquire for the best varieties of glass, suitable for making some new and very excellent invisible "bifocal" spectacle lenses (a pretty far cry from photographic optics, isn't it?). These invisible bifocals are made, employing the principle of using varieties of glass with different refracting powers, and conceal the "bifocal" part so well within the lens, that it can scarcely be perceived by wearer or beholder — meanwhile the lens itself preserves a uniform curvature without any small segment abruptly jutting out.

HOW TO MAKE A PHOTO PRINTING FRAME IN FIVE MINUTES.

Lesoir writes as follows to the *English Mechanic:* "Requiring to do a lot of printing in a hurry, and having no extra frames, I improvised several from old negative-boxes, which answered admirably. The idea is, perhaps, not new; but I have not yet seen it described, and, in case the editor considers it of sufficient interest, I will here show how I did it. Take the lid part of a common cardboard negative-box and cleanly cut the top therefrom, leaving a rebate of about one-eighth inch all round, as shown in Figure 1. This constitutes the frame. The box part of the negative-box answers for the back, and is made as follows: Draw pencil lines some distance from and parallel with the end edges, and cut the bottom where shown by the dotted lines (Fig. 2) close to the sides of the box, and bend inwards at the pencil marks. If a stronger job is required, pieces of cloth may be pasted on as in ordinary frames, and the bottom pasted at the center lines. To use, lay the negative in the lid, the edges resting on the rebate; put the printing-paper in place, and lay a pad of blotting-paper on top; then insert the box part, bottom first, and secure with two pins stuck through the sides, as shown in Fig. 3. It is obvious that the frame thus made could be further strengthened by the judicious application of paste and binding-cloth; but, in any case, it will answer if made as above."







SIMPLE HINTS.

Chemicals dissolve quickly if hung in a bag of muslin or calico near the surface of the water. When they are at the bottom, the heavy solution soon collects around them and prevents the water from acting on them. This way requires constant attention; the other looks after itself.

When making up developers always add the sulphite first, then other chemicals, such as bromid, citric acid, and at last the pyro or hydroquinone.

Dusting plates.— Better than a camel's-hair brush is a plush duster, made by folding a piece of plush packing and stiffening the loop with swansdown or felt and fixing the ends between two strips of wood which make the handle. The plush is better of cotton than of silk, because the former does not get electrically excited.

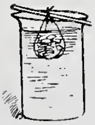


FIG. 1.
Self-acting.

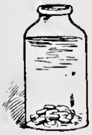


FIG. 2.
Must be shaken.

Take off the cap as though it were hinged to the upper point of the lens hood and replace it in the same way. Not downward, for the first way gives more exposure to the foreground than to the sky, which is generally what you want.

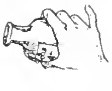


FIG. 3.
Won't "drop," soils label.

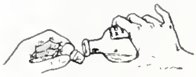


FIG. 4.
"Drops," label clean.

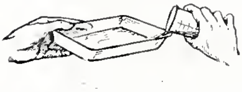


FIG. 5.—The usual way.

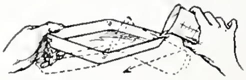


FIG. 6.—The right way.

Dropping minims out of a bottle is difficult if you try to do it as in Fig. 3, but easy *a la* Fig. 4. Notice, too, that the label in the first case is on the under side and gets soiled by the solution. The adroit operator in Fig. 4 keeps it uppermost.

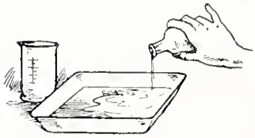


FIG. 7.—Never do this.

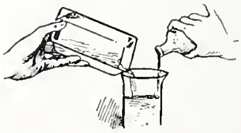


FIG. 8.—The right way.

Don't soak a plate in water before developing. To do so favors pinholes and weakens the action of the developer, because the film does not absorb developer when wet as it does when dry.

Pouring on the developer.—The usual way (Fig. 5) is bad. The right way (Fig. 6) is to hold the dish level and the measure in the right hand. Then do two things at the same time: (1) Move the cup along the right-hand side, letting the developer run out, and (2) lower the left-hand side of the dish as shown (greatly exaggerated) in Fig. 6. Adjust these two movements so that the cup arrives at the dotted position empty.

Altering the developer.—To add liquids direct to the developer in the dish leads to marks on the negative. Always return to the measure and then add the alkali or other solution to the liquid.

Drying plates.—Plates ranged on a rack dry only very slowly, because the air can not get to them. If you remove one which has dried only in parts and put it somewhere where it will dry quicker, you will get a denser picture in the latter parts. By fixing a plate on two nails driven into the wall it dries quickly and evenly.

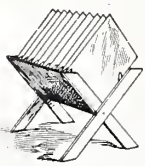


FIG. 9.—Slow drying.

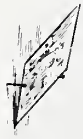


FIG. 10.—Quick drying.

Just soaking prints (as in Fig. 11) is not washing, even if the tap is allowed to run into the dish. Figs. 12 and 13 show a good method. Remove prints singly from 12 to 13. Let them soak five minutes, then put clean water in 12 and reverse the process. Repeat carefully six times.—*The Photogram.*

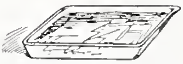
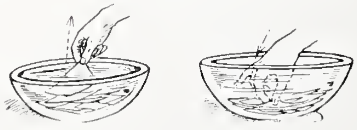
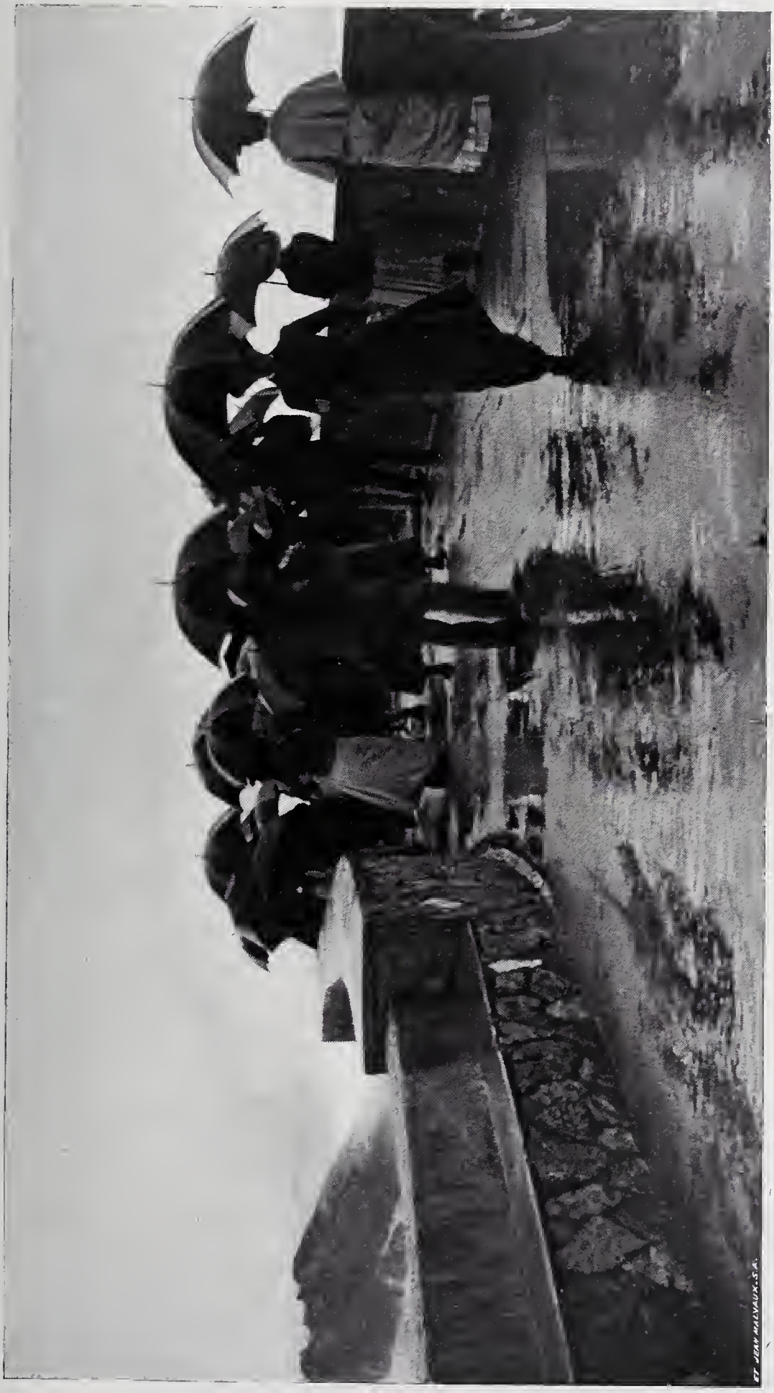


FIG. 11.—Easy, but unsafe.



FIGS. 12 and 13.—A safe method.



Paul Bourgeois.

A SQUALL.

Courtesy of the *Bulletin du Photo-Club de Paris.*

WEIGHTS AND MEASURES.

Touching the introduction of the metric system, the writer has had this subject dear to his heart for many years. The present system of weights and measures is certainly an absurd tangle. To those interested, a reference to Appleton's American Cyclopedia under "Weights and Measures" will disclose the historical foundation for the United States and British fluid measure. It will also reveal the fact that we have perpetuated a system long since discarded by the mother country, and, furthermore, that the two can never be compared directly for verification, as the standard of temperature is different in each.

How much of a stumbling-block these fluid measures are, even in high places, these illustrations will show. One of the foremost dry-plate makers of this country has this to say in his booklet of instructions:

"One gallon of pure water, at a temperature of 16.6° C., weighs 10 pounds, or 160 ounces, or 70,000 grains. The pint, therefore, weighs 20 ounces, but is 16 ounces in volume.

"The measure termed 'fluid ounce' is derived from the weight of a pint of water. A fluid ounce is a measure of volume, not of weight, and is equal to one-sixteenth part of a pint."

In paragraph 1 the first sentence is correct for the Imperial (British) gallon, not for the United States gallon. The second sentence is not correct, as the Imperial pint contains twenty fluid ounces, and each ounce weighs 437.5 grains. Paragraph 2 is correct for United States measure.

One of the annuals has for years repeated the following in the heading of tables of densities of certain solutions:

"The gallon is that of the United States, and contains 133.28 ounces of water. The ounce contains 437.5 grains."

There is no gallon, to the writer's knowledge, of above capacity. The United States gallon contains 128 fluid ounces of 437.5 grains each.

An authority of easy access in these matters is the United States Dispensatory, which can be consulted at almost any drug store on politely requesting the privilege.

The writer some years ago collated a table for comparison of the United States and Imperial fluid measure, and same has been republished in successive issues of the "American Annual.*" In it are given the capacity, in cubic inches, in grains and in cubic centimeters, from the gallon to the dram, and if there is a similar table extant with the same fullness of details the writer has had no access to it. No credit is taken for the table beyond the work done to gather together the material and present it in compact shape.

Still patting himself on the back, the writer would say that under the heading, "The Metric System for Use," his article had been accepted in the "American Annual" for 1890, tending to simplify and explain the metric system and so help the good cause along.

There is not so much room for misapprehension in the system of weights, although few formulas state whether apothecaries' (troy) or avoirdupois weight is intended. The apothecaries' weight is steadily going out of use. Druggists use it only for prescription work and probably seldom in larger denominations than the half-ounce. The writer had occasion to weigh rather large quantities of precious metals at one time, in shape of ingots or buttons. The jeweler's weights at hand were insufficient and he searched all the drug stores in a town of fifty thousand inhabitants and found no weights to help him out. The counter scales were supplied with avoirdupois weights and the pharmaceutical departments with the metric.

A few formulas insist on using the apothecaries' weight. This seems a needless refinement. When these formulas call for an ounce of an ingredient, say pyro, the photographer would be obliged to buy two one-ounce packages to make up the solution, as these developer chemicals are commonly sold in one-ounce original packages of the avoirdupois weight of 437.5 grains, not 480 grains apothecaries' weight.

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* American Annual, 1903; page 329.

Again, if a photographer should order from a stock house one dram of some of the more expensive chemicals, as platinum salts, he would get a vial marked one-eighth ounce, meaning one-eighth ounce avoirdupois, as only precious metals, not their salts, are sold by the troy or apothecaries' ounce of 480 grains.

One practical detail the writer would like to see introduced while waiting for the metric system to arrive. It is that the small apothecaries' weights supplied in the trade, the " coin weights " as well as the square ones, should be marked on one side with the grain equivalents. The photographer can well dispense with the dram and scruple hieroglyphics that would have to be displaced. This would make the interpretation of formulas much more simple, as the schoolboy tables are soon forgotten by the worker, and only the dram and ounce would have to be borne in mind. The scruple never enters into photographic literature, but the grain is much in evidence.

If a prominent stock house should approach a scale and weight maker of the standing in the trade of Henry Troemner, for instance, this small good might come about.

Ottomar Jarecki.

A COMPARISON OF DEVELOPERS.

Mr. J. Gaedicke, in the *Photographische Kochenblatte,* of recent date, has made an interesting comparative test of developers. Each new developer has its champions, and it is rather hard sometimes to get down to the real facts. In testing developers, it should be remembered that the plate which records the impressions must be harmonious; that is, capable of giving a good tone value to the high lights, shadows and intermediate tones, and not too contrasty or too flat, as the case may be. A series of developers was made up and plates developed in them which had been exposed under a sensitometer made of sixteen steps or layers of onion-skin paper. The records were as follows:

	The Picture Appeared in	Length of Development	Last Number Visible	Intensity
	Sec.	Min.		
Rodinal,......	25	3	13	Moderate
Edinol........	22	3	13	Mod. Very Clear
Pinakol.......	15	2	13	Moderate
Adurol........	20	3	13	Strong
Amidol.......	13	2	13-14	Pretty Strong
Ortol.........	21	2	13	Little Less Strong
Glycin........	37	4	13	Very Strong Very Clear
Metol.........	5	1	13	Moderate
Hydroquinone	80	5	13-14	Strong
Pyrocatechin	165	11	13-14	Very Strong Very Clear

The most rapid developer is metol; the slowest, glycin, hydroquinone, pyrocatechin; the most intense negatives were produced by glycin, hydroquinone, adurol and pyrocatechin; the clearest by pyrocatechin, glycin and edinol.

The keeping qualities of the solutions which are ready for use are excellent in the case of rodinal, but remarkable in the case of adurol. Amidol and ortol also keep well, edinol and pinakol will keep least of all. From the above experiments it appears that adurol and glycin do not receive really as much consideration as they deserve, which is possibly due to the fact that the public is not sufficiently familiar with them. Adurol possesses the following advantages:

1. A solution of adurol ready for use, and in the proper strength, will keep perfectly white for a very long time, even when the bottles are only partially filled, and in this respect it is superior to the other developers, especially to edinol and pinakol and pyrocatechin.

2. Adurol is the quickest working developer of those four developers which yield the best intensity, and it combines, in the highest degree, speed and intensity.

3. From the experiments it has been shown that adurol produces negatives which render more nearly correct light values than any of the other rapid developers.

4. It is superior to hydroquinone, for the reason that it is not affected by the temperature.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

SIMPLE METHOD OF COPYING WITHOUT CAMERA OR LENS.

Having a love for the beautiful in art and nature, and a limited knowledge of the science of photography, the idea has often come to me that if it were possible to exactly reproduce photographic prints, etchings, steel-plate engravings, photogravures, half-tone prints, etc., upon all kinds of photographic papers without the use of a camera or lens, a field would be opened to the professional and amateur photographer which only a comparative few have entered. The limit is at present marked by the size of camera and quality of lens used, and beyond this few, if any, have passed. Noting these facts and conditions, I began a series of experiments which resulted in perfecting a method of copying suitable pictures of any size without the conventional camera or lens, the value of which will be readily appreciated by both professionals and amateurs who have been handicapped by unsuitable instruments and unsatisfactory results.

The copying method consists of making a negative on a sensitive dry-plate, held in direct contact with suitable positive print by an ordinary photographic printing-frame, exposed the requisite length of time to actinic light, developed, fixed, washed and dried in the usual manner. A positive can then be made from the negative produced in this manner, which will have all the beauty and artistry of the original, to which any tone may be given by the use of proper printing-paper. Thus a beautiful steel-plate engraving, etching or carbon print may be reproduced on platinotype paper, in black or sepia tone, making an artistic gem in every respect for additional home decoration or presentation to friends.

As the necessary apparatus is in the hands of all who delve into the mysteries of the darkroom, there is only one additional requisite to successful operation, and that is the conformity of the subject to be reproduced to the size of appliances used. Thus, if anything larger is undertaken, such as 10 by 12 or 12 by 14 inches, it will be necessary to procure a printing-frame, dry-plates, developing and fixing trays, and photographic papers of equal dimensions. Supposing all these are at hand, I would advise the following procedure: Take, for example, a steel-plate engraving, the engraving proper being 10 by 12 inches. Trim the mat so it will just cover a dry-plate of this size. Should the engraving proper be smaller, care must be taken that size of mat exactly conforms to that of plate, otherwise halation at the edges will be the result. Lay a sheet of plain, clear glass, 10 by 12, in the printing-frame; on this lay the engraving, face up, then a sensitive dry-plate, emulsion side down, follow with a sheet of black needle-paper, then the back of frame, clamp, and you are ready for the exposure. The black paper is necessary to prevent halation, which would occur if direct rays of light during exposure passed entirely through the film and were not absorbed. Loading of frame must be done in a darkroom, aided only by ruby light. Artificial actinic light is better than daylight for use in making the exposure, on account of the rapidity of the sensitive plate. Those in possession of a Carbutt's lantern will find it to be admirably adapted to the purpose, as one need only to open the door to the left to make the exposure. However, a substitute can be made from an ordinary lamp with shield attached to control light. If the paper on which the engraving is printed is of medium weight, one to three seconds' exposure to the white light of lantern or lamp will be found sufficient, other weights accordingly. Any good quality of plate of medium rapidity will yield satisfactory results, but I would suggest the nonhalation type, with developer to suit. If steel-plate effect is desired in finished print, use hydrochinon, and, for soft effect, a developer yielding less contrast. If soft print is desired from contrasting negative, use a sheet of transparent celluloid between negative and paper when printing.

In making a negative from a glossy photographic print, or a colortype print, or lithograph, it will be found advantageous to place a screen of light yellow or orange color between frame and light at time of exposure to facilitate the correct rendering of colors in outline. The screen may be of tissue-paper, providing there is an absence of pinholes, bearing in mind that its use will necessitate a lengthened exposure.

If print to be reproduced is mounted, it must be removed therefrom by soaking in water until loosened, washed and dried between blotters so it will lie flat. Care must be taken to remove all markings or spots from the back of subjects to be reproduced, for, if allowed to remain, they will show in the negative.

Courtesy of the *Bulletin du Photo-Club de Paris.*

When using a printing-frame of larger size than print to be copied, it will be necessary to cover the remaining surface of clear glass with a mat of black or nonactinic paper, to prevent halation at edges of negative. Put mat in front of clear glass and not between glass and dry-plate, as an extra thickness of paper will not allow perfect contact of positive print with sensitive plate. Strips of nonactinic paper may be pasted on the front of clear glass, over parts which the positive print does not cover.

Use brush to dust positive print, sensitive and clear-glass plates before exposure. Keep clear-glass plate perfectly clean and free from marks.

Do not forget that care must be used in successfully operating this method of copying the same as when making a good reproduction with camera and lens. Care is essential to good results in all branches of photography.

Use sufficient bromid, or other restraining agent, in the developer to hold in check any possible overexposure. A little practice with small plates and subjects will lessen the number of failures when larger ones are used.

Charles P. Diehl.

You can sell what you don't want and buy what you do want through *The Home Bazaar.* See advertisement in this issue.

PROSCH SHUTTERS.

Prosch "Athlete" and "Triplex" shutters have been the "old reliable" favorites among out-of-door professional photographers, newspaper and magazine workers, lecturers, travelers, etc., during the past dozen or more years. The reason for this is their extreme range of speed and great illumination, in both of which features they possess more than double the working value of any other shutter located at the diaphragm. Their method of illumination in opening from the center and closing to the center again, in one uninterrupted double pass-by movement, at the same time producing an opening shaped like a "V" upside down, which gives the foreground more exposure than the sky, is the only scientifically correct exposure for any shutter to give. All other shutters working at the diaphragm give, in a single pass-by movement, an exposure from one side to the other, or, as in the iris diaphragm type, an open-and-close movement which practically cuts off over half of the proper amount of illumination. The double pass-by movement at the diaphragm, which is controlled entirely by the manufacturers of Prosch shutters, is the only one which gives at the same time all of the results desired by the practical photographer, that is, great range of speed, correct and full illumination, as well as great depth of focus.

The new Prosch shutter, the "Diaplane," possesses all of the popular features of the older models as well as several new ones, such as iris diaphragm in place of the revolving disk, a much wider range of speed, more compactness in size and greater adaptability to hand cameras. This new shutter is the most perfect one ever offered by the Prosch Manufacturing Company. It is made in two styles, which are distinguished as "Diaplane I" and "Diaplane II." The "Diaplane I" is the amateur's model, which is made smaller and more compact than any Prosch shutter has ever been, in order to make it suitable for all kinds of hand cameras. This is made in sizes from No. 1 to No. 6, which makes it suitable for all cameras ranging from 3¼ by 4¼ to 5 by 7 in size. The prices of this style range from $17 to $22. It has a range of speed from time and bulb and slow instantaneous exposures to 1-200 of a second, which makes it suitable for the most rapid as well as the slowest work the average amateur may wish to do. In fact, the lenses usually furnished with hand cameras for the amateur do not work fast enough to utilize over one-half the speed capacity of this shutter. However, it is better for the photographer to have a good shutter with a poor lens than to have a good lens with a poor shutter, for in the latter case the shutter would make it impossible to utilize the speed of his lens.

The "Diaplane II" is designed to be the most perfect and most powerful Prosch shutter ever placed on the market for the professional or advanced amateur, that is to say, the best shutter that it is possible for him to get. It has a much wider range of speed than the "Athlete" or "Triplex" shutters, and is much more compact and simple in construction. It is made in sizes from No. 3, which is suitable for 4 by 5 cameras, to No. 8 or even larger, and ranges in price from $25, for the No. 3, to $30, for the No. 8, and more for the larger sizes. This shutter is especially designed to utilize the fullest possible speed of all the anastigmatic lenses on the market, and to enable the operator with it to do any work he is able to do with the focal-plane shutter. It has a range of speed from time and bulb and slow instantaneous exposures to 1-300 of a second with ordinary fittings, or as high as 1-600 of a second when the extra springs and flies furnished with this shutter are used. The operator himself can easily adjust these for his fastest work. In appearance this shutter does not differ much from the "Diaplane I," except that it is somewhat larger, stronger and more powerful in order to withstand the most severe tests that the work of the professional in all parts of the world will give it. As was said above, both of these styles of the "Diaplane" shutter are fitted with iris diaphragm in place of the revolving disk.

These shutters can be fitted to any lens or any camera, and they are capable of doing any class of work, from the simplest to the most exacting, that either the iris diaphragm or the focal-plane shutters are called upon to do. This new "Diaplane" meets the demand of the ordinary amateur as well as the professional for great range of speed so perfectly that it obviates the necessity which has been thought to exist for the speedy curtain shutters. The speed markings mentioned above for these shutters show actual time and not merely theoretical markings, such as are used on so many other shutters. Every Prosch shutter which leaves the factory is thoroughly tested for speed, and the indicated speeds are all guaranteed.

FORMULÆ IN THE DARKROOM.

A useful hint on recording formulæ or other data, to which one may have to refer in the darkroom, was given by the *Daily Telegraph* a few days ago. The memorandum tablet consists of a sheet of glass ground on both sides, and fitted with a wooden frame, in the corner of which a hole may carry a loop of string for hanging up. There are many formulæ or weights and proportions not easy to carry in one's mind and yet difficult to refer to in the low light of the darkroom, but the slate above suggested is, of course, read by transmitted light, with perfect ease.—*Exchange.*

TO LOOSEN STOPPERS THAT ARE STUCK.

1. Hold the bottle firmly in the hand or between the knees, and gently tap the stopper on alternate sides, using for the purpose a small piece of wood, and directing the strokes upward. 2. Plunge the neck of the bottle in hot water, taking care that the water is not hot enough to split the glass. If the stopper is still fixed, use the first method. 3. Pass a piece of lint around the neck of the bottle, which must be held fast while two persons draw the lint backward and forward. 4. Warm the neck of the bottle before the fire, and when it is nearly hot the stopper can be removed. 5. Put a few drops of oil around the stopper where it enters the neck. Next, warm the bottle before the fire, and then apply process No. 1. If the stopper still continues immovable, repeat the above process until it gives way, which it is almost sure to do in the end. 6. Take a steel pin or needle and run it around the top of the stopper in the angle formed by it and the bottle. Then hold the vessel in the left hand, and give it a steady twist toward one with the right. If this does not succeed, try process No. 5, which will be facilitated by it.

The Prosch Manufacturing Company announces its removal on May 1 from 389 Broome street to new and larger quarters at 145 to 151 West Eighteenth street, New York city. This company has been located at the old address throughout the past seventeen years, and during that time it has placed on the market several of the most successful photographic shutters and magnesium flash-lamps ever offered to photographers. These include the original Prosch shutter, the "Duplex," and the later models, the "Triplex," "Athlete," "Triplex-stereoscopic," "Athlete-triplex" and the new "Diaplane" shutters, as well as the "Lightning," "Professional" and the new "Prosch-lite" storage flash-lamps. These products will now be manufactured on a much larger scale. With its greatly increased capacity, additional modern machinery and ample space, it will be able to fill orders much more promptly than in the past.

EDITORIAL TABLE.

"What Taylor Taught Me" is the title of a very clever booklet dealing with some of the problems of a lens in a rather simple and neat way. It discusses flatness of field, astigmatism, speed, color correction, very clearly, and altogether is a good book to have around. Copies will be sent on request by Voigtlaender Optical Company, 137 West Twenty-third street, New York.

FROM the Gundlach Optical Company, Rochester, New York, comes a copy of their catalogue for 1903, in which is very fully described all the cameras made by the firm. The first part of the booklet is devoted to a very interesting chapter on Korona construction, showing how the different parts are built up and the predominant idea of each. The methods of securing positive action in the rack and pinion, in the locking device and the swing-back are clearly explained and exemplified, while the shutters, of which there are no less than half a dozen different kinds, are very clearly explained. In the second part details are given regarding the ten different kinds of hand cameras manufactured by the firm and of the various stand instruments made by them. The lenses have a chapter all to themselves, and very many varieties are described. The illustrations are not the least interesting part of the book, because, in addition to being examples of good photography, they are also of high pictorial quality. Altogether, the catalogue is a very interesting one and will be sent on receipt of request.

FROM Taylor, Taylor & Hobson, St. James building, New York, we have received a copy of their very latest catalogue, in which are described the various forms of Cooke lenses manufactured by the firm. Of special interest is the new lens-tester recently designed for testing lenses, one model of which is to be found at the New York office, and which New York residents will be glad to learn is placed at their disposal for the testing of all kinds of lenses, whether manufactured by Taylor, Taylor & Hobson, or not, and we have no doubt that many amateurs will gladly avail themselves of this opportunity, both to know exactly the quality of their own instruments and also as a practical experience in learning how to determine the accuracy of any instrument. A copy of the catalogue will be sent on receipt of request.

"THE SPEEDWAY CAMERA AND HOW TO USE IT" is the title of a booklet received from G. Gennert, 24 East Thirteenth street, New York, in which is described with great minuteness a style of instrument that is different from all makes of cameras now found on the American market. It is especially designed for very rapid instantaneous work, and is finished in ebony and nickel, the aim being to make it not only of the highest serviceability, but of the greatest beauty. The shutter is of the focal plane type, giving exposures from the 1-9 of a second to the 1-1,000, and it is therefore adapted for practically every kind of exposure that one can meet with out of doors. There are many other points of interest about this beautiful camera, but as these are all fully explained in the catalogue, it is unnecessary to go into detail here, and we would simply advise the forwarding to the firm a request for a copy of the booklet.

THE April number of *Camera Craft* is an Industrial Number, and is of more than usual interest. It contains a complete and critical article on all of the new cameras and photographic apparatus to be marketed during the coming season, several interesting articles on the manufacture of various important photographic instruments, a series of portraits of the leading manufacturers, and page after page of valuable information for the amateur, the professional and the dealer. The usual features of the magazine are not neglected, and although the size of the issue has been greatly increased, the price remains the same, 15 cents a copy.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

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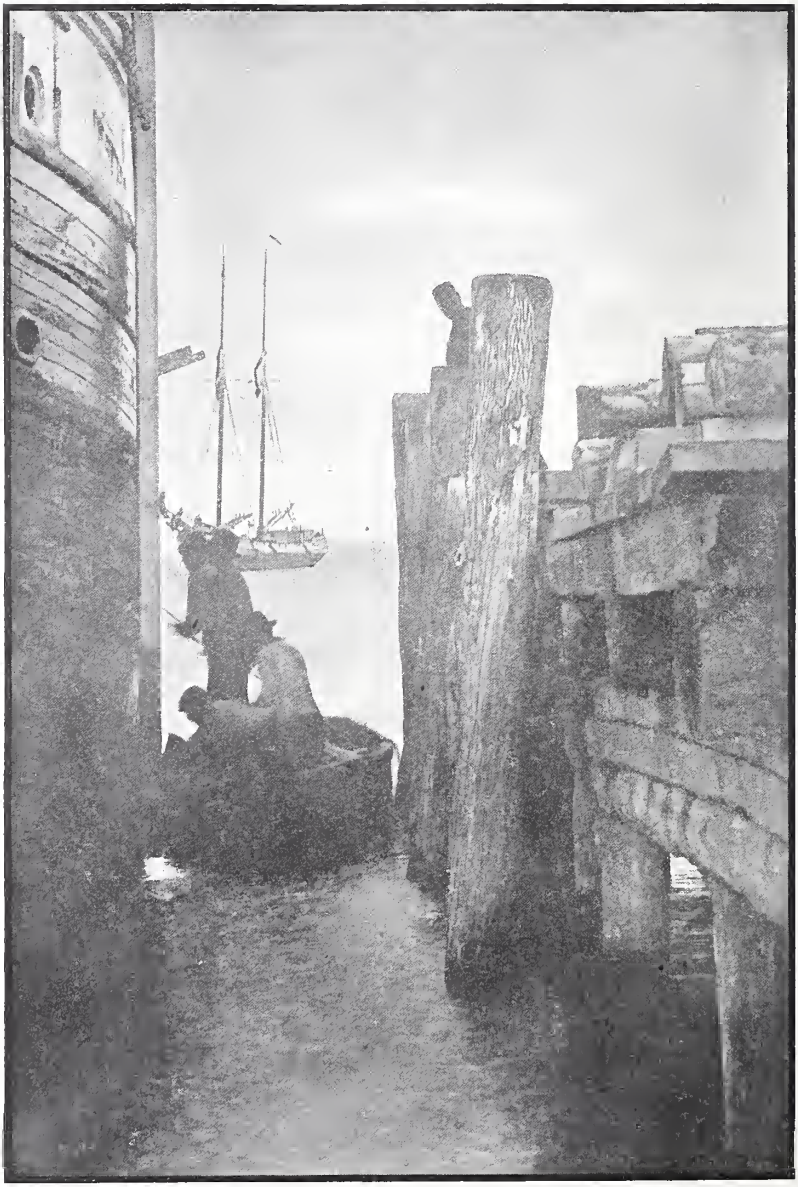

Negative by Fedora E. Brown. Grand Rapids, Mich.

FIRST PRIZE.

THE
PHOTO-BEACON.
EDITED BY F. DUNDAS TODD.

Published by the Photo-Beacon Co., 409 Security Building, Chicago.
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CEILING PHOTOGRAPHY.

For many years I have been under the impression that I was perhaps the only individual in this country to whose lot it had fallen to photograph a ceiling, nay, more, I presumed that it was very probable that I would long retain that post of honor. In fact, I felt about this as I did about my perusal of Carlyle's "Life of Frederick the Great," that I was the only one who had done it. Whenever a man begins to talk to me about not having read some certain book and expresses great surprise that I have not traversed its pages I am always able to turn the tables by asking him if he has read Carlyle's "Life of Frederick" and then, in turn, express my surprise that he has not done so. It is almost twenty years since I performed the feat, and from that date to this I have never met one who has duplicated my experiment.

A few days ago I received a letter from a correspondent inquiring about how I would set about photographing a ceiling, and it just so happened that I once photographed two of them. They decorated two of the rooms in the West Virginia building at the World's Fair, and the maker of them desired to have them on record and so the task was allotted to me. I thought the problem over for a little bit and at once realized two difficulties that had to be faced. One was to place the object square on the plate, and the other to secure a sharp focus. As an amusement a few years before I had been very much interested in geology, and in pursuit of my hobby I had invested in a geological compass which differs from most others in this respect, that it is fitted in a square box so that by placing it against any object one can readily find its polar bearing. It so happened that this instrument was with me and I at once saw my way out of that difficulty.

The picture was desired to be at least on a 11 by 14 plate, and a little calculation showed me that a very wide-angle lens was necessary and so I used one, if I remember rightly, of not more than nine inches focal length. On proceeding to the building my first task was to find the center of the room, which I located in rather a crude fashion, thus: I placed on the floor a small chip of wood as near the center as I could guess, then I proceeded to one of the corners of the room and faced the one opposite, and by a little adjustment I soon got the chip into its proper line. Then, changing to one of the other corners, I did the same thing, and thus determined the point above which the lens must be placed. Making a pencil mark on the spot I tossed the chip aside.

A ceiling is a very near object, and so it was necessary for me to get the camera as close to the ground as possible. A tripod was entirely out of the question, and so I improvised a stand out of a low horse, such as is used by carpenters to lay planks on while they are being sawed. To support the camera, I nailed a piece of one-inch board very firmly to the side of the horse — this part being in a perpendicular position — then through it I bored a hole for the tripod screw, and in a few minutes I had the camera in place — the ground glass being about fifteen inches from the floor.

The next problem was to square the camera with the room, and this was easily done by pressing the compass on the side of the wall and reading off the angle and then pressing it against the camera and moving the horse around till the same angle was read off.

I found focusing a very ticklish proposition, because of the lack of illumination in the object. To perform the feat I stretched myself flat on my back, and, placing my eye on the focusing glass, tried to detect an image in the center of the ground glass. I here made a very remarkable discovery about my head. I found that my neck muscles were not sufficiently strong to hold it up from the ground more than a few seconds, and so I had to wedge it up by means of a block of wood placed below it, but after a while I was able to get a fine focus in the center of the field. My next move was to perfectly level every part of the camera. First I leveled the front part so that it was absolutely horizontal, and then I did the same thing with the swing-back. True level being secured I had to again focus and all was now ready for exposure. I had not the ghost of an idea as to whether the image on the ground glass was larger than my plate or not, because it was utterly impossible for me to see anything beyond a little part in the center.

Placing the cap on the lens, I inserted the plateholder in position and was very much surprised to find that its weight upset the level of the swing-back, so I had to relevel the latter. To make certain of getting good definition, because it was now impossible to refocus, I used a smaller stop — about F-32, if I remember rightly — and gave about ten minutes' exposure.

On development I found that I had hit everything just about right, getting a beautiful negative. The picture of the ceiling filled up the whole of the 11 by 14 plate, with the exception of a margin less than one-fourth of an inch wide all around, and out of curiosity, with a pair of dividers, I measured the width of the margin at different parts and was surprised to find that I was not more than 1-32 of an inch out.

After this incident I photographed some of the high domes with equal success. On these occasions, however, I used a very tall step-ladder, in order to be nearer the objects. And here, again, I found some new problems, because the difficulty was to focus with a focusing glass, which means the use of two hands, and at the same time keep the focusing cloth around my head, and also to balance myself on the step-ladder. In fact, I found on this occasion it would have been advantageous for me if I had possessed four hands instead of two. To photograph such an object with a small camera, the procedure is very much easier, because one can readily focus on some object whose distance is equal to the height of the ceiling, and then the camera may be placed on the ground.

I am obliged to the reader who put this query to me, as it provides me material for an article, and I will be glad to have similar problems sent my way.

F. DUNDAS TODD.

ONE of the troubles with collodion matt papers, like Aristo Platino, has been the bronze iridescence, which comes sometimes on the high lights. Heretofore no remedy has been known, chemicals would not move it, and even the most skilful printers rejected some prints from bronzing. Anti-bronze is a new preparation which removes the bronze when rubbed on with a piece of flannel. G. Gennert, 24-26 East Thirteenth street, New York, is agent for this preparation, which costs but a quarter, postpaid.

DO YOU like to do things? If so the *Home Bazaar* is just the paper for you, for its mission is to help you. Only 50 cents a year. See advertisement for contents.

COMPETITION No. 60.

Water subjects are always very popular with the amateur photographer and each year the quality of the work submitted in this competition attains a higher standard. Very little of what might be called poor stuff is nowadays sent in, and such pictures as the judges label, as being deserving of honorable mention, would easily have secured prizes not so very many years ago.

The judges made the following awards:

First prize — Miss Fedora E. Brown, 144 La Grave street, Grand Rapids, Michigan.

Second prize — Sara W. Holm, 4439 Lake avenue, Chicago.

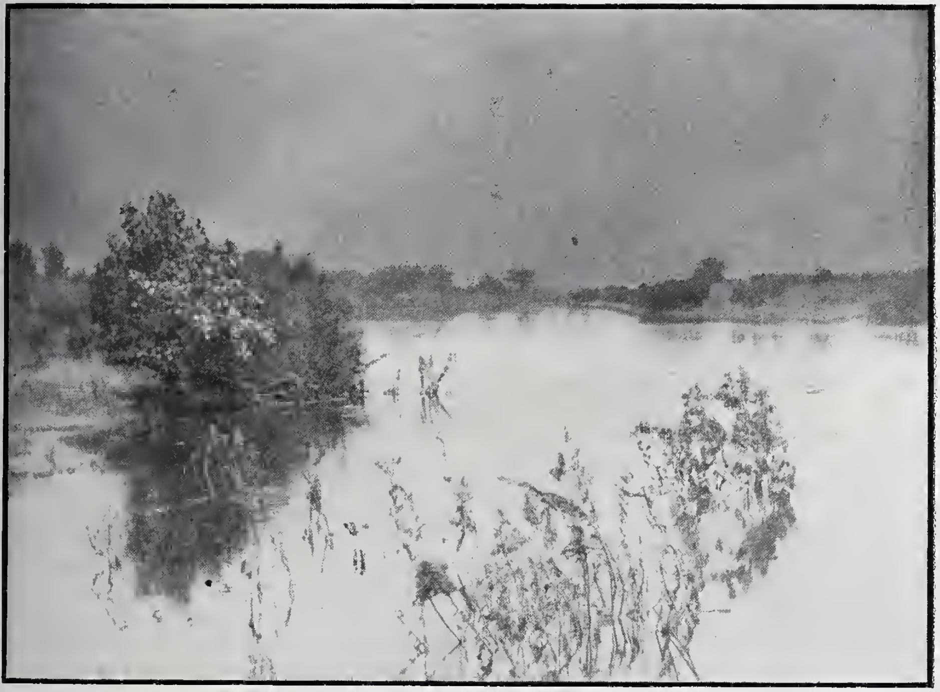
Third prize — A. G. Beebe, 582 W. Adams street, Chicago.

Honorable mention — J. H. Field (2), John W. Schuler, J. Ernest Hounsom, F. R. Lockhart, Curtis Bell, A. H. Waite.

PARTICULARS OF WINNING PRIZES.

First prize — Taken August 8 in hazy light, stop 32, exposure 1-25 second, on Seed's L. O. plate, printed on Eastman's Bromid.

Second prize — Made on Stanley plate with exposure of 1-25 of a second, printed on Willis & Clements platinum paper.



Negative by A. G. Beebe. Chicago.

THIRD PRIZE.

Third prize — Made June, 1902, at 2 P.M., light cloudy weather, stop No. 16, exposure 1-15 of a second, made on Cramer Crown, printed on Carbon Velox.

CRITICISM OF WINNING PICTURES.

The first prize picture is a very interesting example of perpendicular spacing and of the massing of lights and shades. Notice the hull of the boat, the mass of timber, the sky, the distant sea, the men and the boat and the near water, and notice how each mass is of a different tint. The minor subdivisions of the space any one can see for himself, and, therefore, I need not particularize any further. This is a very simple subject and is successful because of its emphatic breadth of treatment.

The second prize is just as broad. The spacing here is more diversified. We have the water, cows, bank on the right, foliage in the distance and on the left. It is a very simple story and depends for its success upon the broad massing.

In the third prize picture we have more of a poetic condition, due to the softening haze that lies over everything, giving a charm to the fading away of the water in the distance, leading the eye out into regions beyond. The masses of the picture are self-evident, but I would draw particular attention to the clump of foliage in the foreground, without which the picture would be a complete failure because this clump limits the expanse of water and prevents it running out of the picture.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 62 — Domestic animals. Closes June 30.

Competition No. 63 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 64 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.
2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.
3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

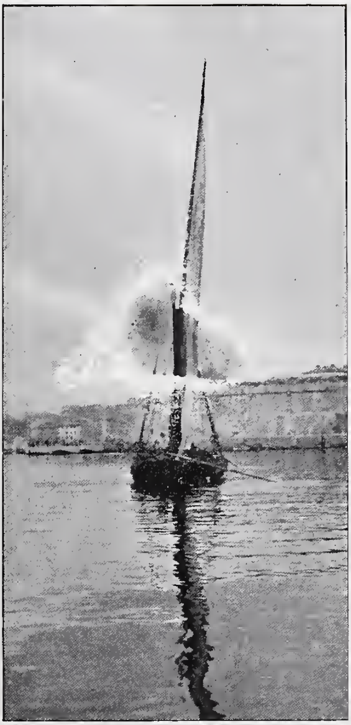
Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

A NEW INTENSIFIER.

Herr Ebert described, at a recent meeting of the Vienna Photographic Society, some interesting phenomena, which he had observed when experimenting with the new process of katatypy; and, while we so far are unaware of anyone in England who has experimented with this process, a brief note of Ebert's results may lead others to note their experiences. As is well known, the first step in this process is the flooding of a negative with an ethereal solution of hydrogen peroxid; now Ebert noticed that when this was done, the negative was intensified, and that a precipitate was deposited which gave a sensible relief, and the oftener the ethereal solution was applied the greater this relief. Now, as nothing but the ethereal solution was applied, Ebert assumes that the metallic silver undergoes a partial oxidation, or at least some chemical change, and this view is supported by the fact that no sooner is such an intensified negative immersed in water than the relief disappears and bubbles of oxygen are given off. It is obvious that there is here an extremely simple method of intensification, which is not poisonous, and, in which, if desired, the original intensity of the negative can at once be restored by mere immersion in water;

the only disadvantages are that care must be taken to ensure absolute evenness of the flow of the ethereal peroxid, and this must be done quickly, or else uneven patches are formed; or, if too long over it, oxygen bubbles are given off, and blisters are formed. The intensification given by this method is said to be equal to that given by mercury and ammonia, or bromid of copper, and it can be repeated more than once. When transparencies on chlorobromid plates were treated in this way, not only were they intensified, but beautiful sepia brown images were obtained. Herr Ebert suggests the advisability of varnishing plates thus treated, as they are extremely sensitive to damp. Another curious phenomenon observed was that bromid paper postcards, treated with the ethereal solution of peroxid, were toned to a warm sepia, and by repeated application the color became even yellowish red, and further that these warm-toned images could be developed with various developers, and still finer and warmer tones obtained.



F. Michelis.

TONING PLATINUM PRINTS WITH FERROCYANID OF COPPER.

Ferguson's method for toning bromid papers and lantern slides with copper may be applied to platinum papers by adding either potassium or ammonium sulfocyanid to his formula. Possibly other reducing agents can be employed with similar results, but I have tried only the two mentioned.

The following is the modified formula I use:

I.

Water (distilled)	3 ounces
Copper sulphate	60 grains

II.

Water (distilled)	3 ounces
Potassium ferricyanid	53 grains

III.

Neutral potassium citrate saturated solution.

IV.

Water	1 ounce
Potassium sulfocyanate	50 grains

Mix I and II — a muddy precipitate will be formed — to this add III slowly, and, with constant stirring, until the precipitate is just dissolved, then add ½ ounce of IV.

Stock solutions of copper sulphate and potassium citrate may be made up, but the toning bath should be used perfectly fresh, otherwise staining will occur.

Prolonged toning also encourages staining, since the bath deteriorates rapidly. At times, I find it advisable to complete a print in a second and fresh bath. Old prints, especially those which have been much handled, stain more readily than newly-made ones. If a red sediment lodges on the surface of the paper it may be removed by rubbing with cotton and water before the print is dry, or with cotton and alcohol afterward.

The deposition of color takes place very slowly, and is controlled by the strength of the bath. This may be varied, but the quantities of salts given above, with a total bulk of solution of 6 to 8 ounces, works most satisfactorily. Toning continues as long as the print remains in the bath, and the color change is an intensification — not a replacement. Hence, allowance must be made for toning by selecting prints weak in proportion to the warmth of color desired.

Sepia prints, made on the regular sepia platinum or by mercury development, tone more rapidly than black-tone prints.

The above method of toning is analogous to the uranium process and a similar gradation from warm black to red may be obtained. The color produced is richer and has an additional advantage in that it does not fade with prolonged washing in running water.

Concerning the permanency of the copper ferrocyanid deposit I am able to give but little information — my oldest toned print dates only to December, 1900. However, it shows no discernible change. H. William Menke.

PHOTOGRAPHY IN THE ARMY OF THE PHILIPPINES.

Photography in the Army of the Philippines is very different from photography in the Army of Cuba. During the Cuban campaign fully two per cent of the soldiers carried kodaks of some kind. The difficulty of carrying kodaks and supplies in the swamps and hills of the Philippines is greater than in Cuba. Your correspondent, who accompanied the troops in the Cuban campaign, was a member of one of the volunteer regiments throughout the Philippine war, and is at present with the expedition against the Moros on the island of Mindanoa. During all this time I never failed to carry a kodak. I have secured views with it which have proven of great value to officers, soldiers and others. I think it possible for any one with an army in the Philippines to carry a folding pocket-size kodak, and with a little exertion and strapping the larger sizes can be carried. I first started out with a box kodak swung over my shoulder with a strap. This bothered a great deal by catching in the underbrush. I finally fell on it and broke it. I then secured a folding kodak and have carried it stuck into my belt or in its case for three years. The film machine is, of course, most freely used in the field, although now and then you will see the plate camera.

Possibly one of the chief problems in the Philippine campaign is the question of supplies. It seems to matter very

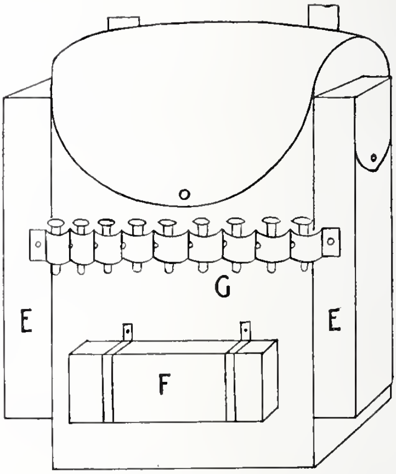


Fig. 2

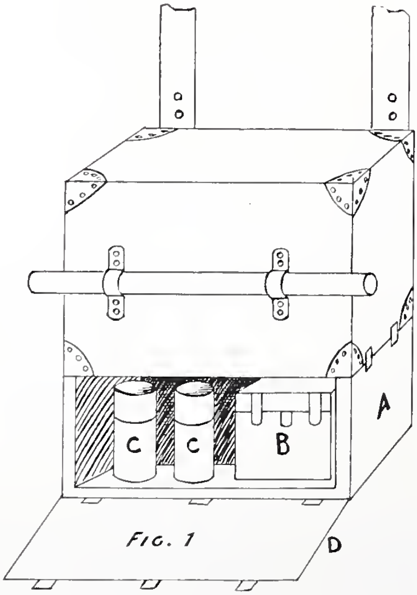


Fig. 1

little how large the orders of dealers may be on United States houses for supplies, these dealers are usually out of whatever you want. They receive a stock of films from the home branch and in a day they are gone, so to speak. There are agencies for the sale of kodak supplies in Manila, Iloilo, Zamboanzo and other important places, and the demand upon these concerns is very great. They do what they can to fill your order, but usually send a note to you with about half the films you want saying they will send the remainder as soon as the next transport arrives. Kodaks, however, are usually well in stock. Developing apparatus is also usually available. Just now I am with a column in the interior of Mindanoa and could sell the 2½ by 3½, and the next two sizes larger, for about $2 gold each roll. In fact, I would myself pay the price each for a dozen rolls. I am down to the last roll and the available views which are daily presenting themselves are too good to miss. Forts and stockades are being taken and all is activity.

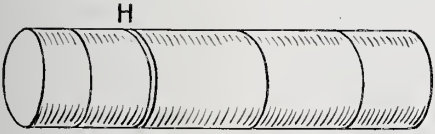


FIG. 3

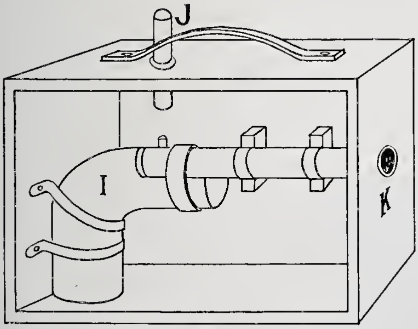


FIG. 4

It is, of course, chiefly the question of carrying the outfit that prevents many more officers and soldiers from equipping themselves before going off on a campaign. From all sides I hear the statement, "I wish I had brought a camera with me." When I first went out, some three and one-half years ago, I carried my outfit like that shown in Fig. 1. I also carried my rifle, cartridge-belt, haversack, canteen and blanket roll. This device consists of the square-box kodak fitted with a base apartment A, into which rolls C C and box B are placed. The cover D is arranged for hooking up. This made a bulky affair, and I would not advise its use.

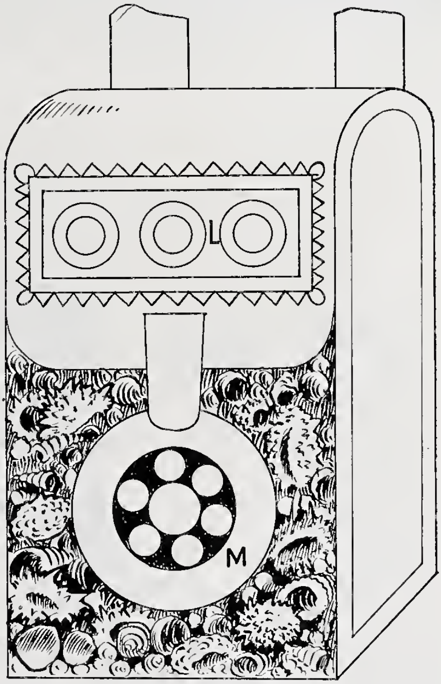


FIG. 5

When you are in the enemy's country, it becomes essential that you carry ammunition. In my present assignment with the engineering corps, I carry a revolver instead of a rifle. The ammunition I carry in a part of a belt fixed to the front of a folding-kodak case, like Fig 2. I have pockets E E sewn to the edges of the case and made waterproof so as to carry rolls. In the package F I carry small articles of any sort, such as pencil, paper, stamps, string, etc., for mailing films to some point for developing and printing.

I found that one of the chief troubles consisted in keeping the films dry. During nearly all engagements we were drenched in the tropical rains. I would bind up my kodak and films in my pouch, or would try to protect them in my blue shirt front. I think many of my films are ruined. Waterproof tins for each roll are what I will take next time.

In Fig. 3 I show one of the ways we mail rolls home from the field. It is a piece of hollow bamboo tube, cut in half at H and sealed and labeled for mailing. I found that these tubes, with the roll inside, went through all right.

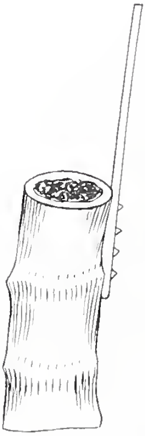


FIG. 6

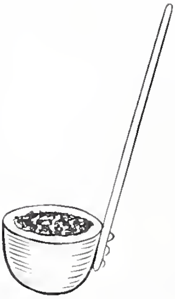


FIG 7

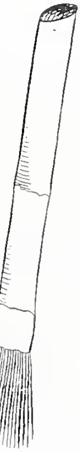


FIG. 8

One of our men was captured by the natives and made his escape by fixing one of the Moro pipe pistols inside the kodak as at I Fig. 4. The muzzle projected at K. This pistol was loaded with bits of nails and powder. It had to be discharged by putting a lighted cigarette through at J. The engineer corps man got the natives to line up for their pictures and then he discharged the pistol. The explosion burst the kodak and injured the hands and face of the corps man, but during the confusion he escaped.

Fig. 5 shows how one of the Dattoes of Mindanoa decorated a kodak case. He had no kodak in it. At L is a base of metal in which are three pearls. These pearls are from the pearl fisheries of Jolo. At M is another cluster of pearls. The ground work is made of shells.

Some of the soldiers carry their developing outfits, but usually must keep these in the garrisons, as there is no room in the haversack. I saw crude home-made utensils, like the wood tube device in Fig. 6, in use by one man. Another used a cocoanut shell attached to a handle, as in Fig. 7. For a brush, some bristles were placed in a quill, as in Fig. 8. SOLDIER.

OHIO-MICHIGAN CONVENTION.

The officers of this association announce a very practical and instructive program at the Saginaw meeting, July 22 to 24.

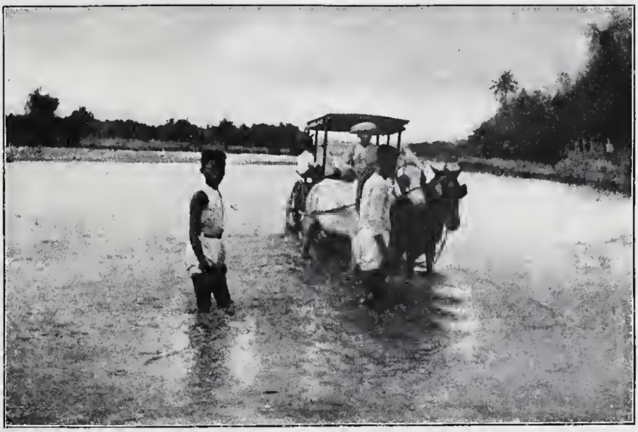
THE CONVERSION OF THE SILVER IMAGE OF BROMID PRINTS INTO PLATINUM.

BY C. WINTHROPE SOMERVILLE.

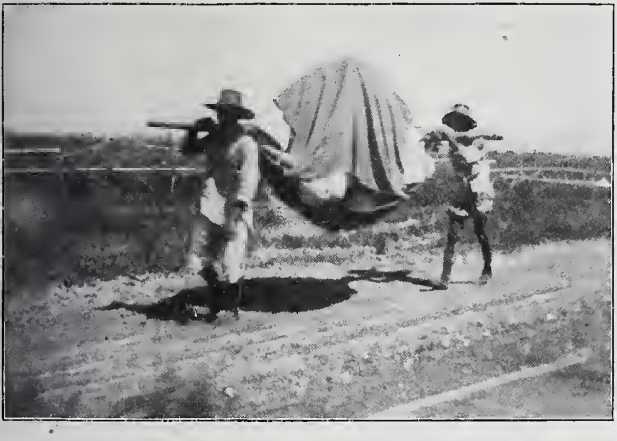
In coming before the society with this paper, I much regret that I am compelled to state the effects of the process without the cause. During four years' patient research, however, I was unable to get any outside information on the subject whatever, and my results were obtained by almost blind experimental work, with few and vague theoretical chemical considerations to guide me. My investigations were prompted by a call for two very desirable features in the bromid process, both of which could then only be obtained in the platinotype and carbon processes; one was permanency, and the other a sepia color.

It was in the year 1887 that I first took up bromid printing. I soon saw the possibilities and superiority of it over other printing processes, more especially in the matter of large work, but it was not till about eight years later that I started my investigations for the obtention of the two features named.

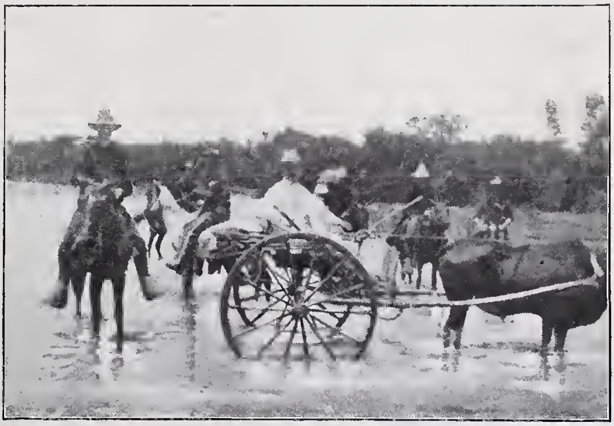
Many new formulæ for toning bromids were published about that time, and among them for sepia tones were



CARRIAGE
TOURING
IN THE
PHILIPPINES.



CARRYING
THE SICK.



CROSSING
A RIVER.

lead, uranium and sodium sulphantimoniate. On trial, these seemed to me anything but satisfactory, and even with the present-day revised formulæ I think no better of them, especially uranium, which has the questionable property of giving up its tone by washing.

There may be some who will question my right to condemn the above processes, and substantiate their queries with graphic evidence of their value for a sepia tone, but I beg to say, in part justification, that I am speaking more on behalf of others than myself. The majority of photographic workers are not chemists, and only in very rare instances do we find a published formula accompanied by any chemical and physical considerations for the best working of the process; therefore, for this reason, I say that the originators of the formulæ are to blame for unsatisfactory results obtained by the majority of those for whose use it was intended. With regard to the permanency of the foregoing, no one with any knowledge of chemistry will deny that they are all of a most unstable order.

With some other formulæ for sepia tones are we any better off?

Take, for instance, cases in which the base for the subsequent tone is formed by converting the metallic deposit of silver into silver chlorid by means of a mercury salt. Here we get a range of brown tones, not sepia, by reducing the bleached image with sodium sulphite, liquid or gaseous ammonia, ammonium sulphid, etc., the resulting tone being formed of a complex amalgam of mercury and the reducing agent used. That the colored image formed by these reagents is not permanent I know only by experience, and my knowledge of their unstable construction is obtained more from text-books on the subject than from practical chemical application.

In my initial proceedings I had to decide which was of the most importance, the tone or the permanence, and I feel sure you will agree with me in saying that no tone, however fine, is any good if not permanent; therefore permanency had the prior consideration. This induced me to enter in detail upon the chemical and physical considerations of the permanency of photographic printing processes, and taking bromid, carbon and platinum as the three most generally used for artistic reproduction, the following is a brief review of my reasoning.

Platinum, we know, is the most stable of all metals, and in however fine a state of division is practically indestructible by atmospheric conditions. Carbon also is unaffected by atmospheric influence, but the same can not be said for all the other pigments used in the process.

Silver in a perfectly pure state is a fairly stable metal, but inferior to the others with regard to atmospheric influence, and more so when in combination with a weaker metal. Now the image of a platinum print, if properly worked, consists of pure platinum in a fine state of division, chemically known as "platinum black," and is supported in or on paper. The image of an untoned bromid print is similar in every way except that the metallic deposit is generally incorporated in a film of gelatin, and is also supported on paper. In a pure carbon print the image consists of lampblack contained in the form of a mechanical mixture, also supported on paper. (I emphasize the support for the sake of comparison, as it is well known that other supports, such as linen, silk, wood, opal, etc., may be used in either process.) Light has no influence on deposited silver, platinum or carbon, and may be discarded as a deteriorating element. The atmosphere, were it pure, would have no influence, since none of the elements are affected to any photographic extent by oxygen or nitrogen; but it is usually contaminated in a greater or less degree with other, and deleterious, gases.

These contaminating gases principally consist of carbon dioxid, sulphur dioxid, sulphuretted hydrogen and carbon monoxid; of these sulphuretted hydrogen is the most injurious. On carbon it has no effect; on platinum it also has no effect; on silver it has a slight effect, but no human being could live in the atmosphere which contained the amount necessary to affect the silver. It will, of course, be borne in mind that I am speaking of pure metallic silver reduced from the compound salt, silver bromid. If, on the other hand, the image consisted of an organic salt of silver, such as an albuminate or a gelatino-chlorid, which has been reduced by the action of light, then it is a very different matter. An organic salt is extremely susceptible to even minute traces of sulphuretted hydrogen, in the presence of which the surface of a print will soon be coated with silver sulphid. A simple salt of silver, such as the chlorid, is also very sensitive to the influence of sulphur in almost any form. But as these forms of silver printing do not come within our category, they need not be considered.

Getting the range.

If, therefore, an image consisting of a deposit of pure metallic silver, formed by reduction from the bromid salt, be perfectly freed from everything but the gelatin film in which it is supported, surely it exists in the same state of immunity from extraneous influence or contamination as the platinum which is reduced and deposited in a precisely similar manner by an organic salt of potassium instead of an oxygen absorbing reagent.

If the paper contain any impurities liable to affect the element it supports, the deterioration is directly proportional to the stability of the element or metal deposited on it.

If the deposit be in immediate contact with the paper, then surely deterioration would be more rapid than if it were supported in a gelatin film. Personally, I am of the opinion that in all three cases the paper support is likely to fade or deteriorate before the carbon or metal deposits. I might mention here that the silver deposit on a bromid print is always in danger of a certain atmospheric effect. When a violent thunderstorm occurs in close proximity, the air gets charged with ozonized oxygen, due to electrification (if I may use such a word) by continual discharges of lightning, and, to quote Watts' "Dictionary of Chemistry," "finely divided silver in a moist condition, when acted upon by ozonized oxygen, is converted into peroxid of silver"; therefore, when thunderstorms abound, place all your bromid prints in hermetically sealed glass boxes. On the question of permanency, then, of an untoned bromid print, we might say that there is but little difference between it and the other two, providing all the chemical and physical conditions under which the print should be produced have been complied with. Arriving at this conclusion, I was met with the danger, which at the present day still obtains, that, in toning, the permanency was rendered uncertain by the fact of forming an amalgam with one or more metals of less stability.

There remained only one course open, to form an amalgam with a stronger metal, or effect a substitution. I tried the amalgamation with iron, platinum and gold, but probably owing to the blind manner in which I directed my experiments, my results were totally unsatisfactory. Just at this time a chemical friend, who was not a photographer, and could not therefore thoroughly appreciate my difficulties, suggested the application of platinum in a very fine state of division, which gave the well-known sepia deposit.

Upon trying this, both in the way of an amalgam and a deposition, and meeting with some success, I gave much further consideration to the process. It would be useless and wearying to give a detail of all my experiments, as many of them were carried out with a lack of chemical knowledge of the reactions involved, and only served to reduce the limit of my endeavors.

Suffice to say that I reached a point where I could substitute platinum for the silver, and completely eliminate the silver. But here I received a check — the platinum was left in the form of a black deposit. Curiously enough I came across a similar process for the same result in one of the photographic journals about six months later. The formula is as follows:

Potassium chloroplatinite	5 grs.	Suggested by Vogel in 1887.
Hydrochloric acid	10 mms.	
Water	5 oz.	

This produced a fine black tone which defied the bleaching action of mercury, and in order to prove if the substitution was complete or only partial I applied a cupric bromid bleacher:

Copper sulphate	200 grs.
Potassium bromid	200 grs.
Water	20 oz.

There was no indication of bleaching after the expiration of fifteen minutes, but upon the application of a hypo fixing solution the image rapidly faded till it reached a stage of about half its original depth of tone, when it remained permament and indestructible. This seemed to indicate the presence of silver, and in order to prove it I subjected another toned print to the action of cupric bromid, and after washing applied a rodinal developer, with the result that the image intensified to an enormous extent and of an exquisitely blue-black tone. Upon again applying the bleaching solution and dissolving the silver bromid formed, the image faded away to the weak state previously mentioned.

These experiments proved beyond question that the substitution of the platinum for the silver was only partial, and that no matter how long the immersion, or how strong the solution, the substitution was limited. While this was, to some extent, discouraging, it was, nevertheless, a great point gained on the question of permanency, and I was convinced that if platinum could be reduced to the metallic state of a sepia tint, as in the platinotype process, it could be done by other means. The simple chemistry of toning ordinary gelatin chlorid prints with gold and platinum appealed to me strongly at this stage, and I fully consulted such current authorities on the subject as Abney, Wall, Davanne, Girard and others. I applied my knowledge by combining a solution containing platinum with one of mercury, with the idea of simultaneously bleaching the silver and depositing the stronger metal. Whether such action took place I regret that even now I am unable to say, but the fact remains that I obtained the first approach to a sepia tint in this way. True, the process was far from being satisfactory, since unless a very great quantity of platinum was used the print bleached too rapidly, the tone being much to light. This seemed to indicate the want of a restrainer, and upon the application of a citrate I got very near to what I wanted. I say very near, because after many experiments I found that the proportions of the bleaching and restraining reagents must be exact and invariable, while the quantity of platinum is immaterial, affecting only the speed of toning or deposition. The

Negative by Sara W. Holm. SECOND PRIZE. Chicago.

complete and best working formula I have found is:

Potassium chloroplatinite	1 gr.
Mercuric chlorid	1 gr.
Citric acid	9 grs.
Water	1 oz.

The speed of the toning action with this formula is about the same as that of an ordinary gold or platinum bath with P. O. P. The tint produced is of a warm sepia, and may be varied slightly by increasing the mercury, when the tone will be somewhat lighter.

Platinum bichlorid may be substituted for the chloroplatinite, but other salts, such as ammonium chloroplatinite, do not work satisfactorily. Now, as I said at the outset, I am giving you the effect without the cause, for I confess that I am not at all sure of the chemical reaction which takes place in the process, especially as mercury is the only bleaching agent with which it will work. As a toner, the formula given has a peculiarity which, I believe, is singular.

It is well known that most, if not all, toning formulæ for bromids — the hypo and alum excepted — produce intensification in a greater or less degree, thereby engendering an uncertainty as to the subsequent depth of tone of the print; in the present case the intensification is slight, but of such a degree that the scale of gradation of a fully-toned print is almost precisely the same as the original scale in black to white. The value of this is obvious, since a print may be developed in the first instance to its ultimate required depth. So much for the simple tones; there are, however, some concomitant features discovered later which are of interest.

A solution made up from the foregoing formula has a slight tendency to stain the gelatin, and it was not till quite recently that I found a remedy. While testing its powers on the bromo-chlorid gaslight papers, I found that the action of the mercury on these was much too energetic, and, instead of increasing the proportion of citric acid, I added some ten per cent bromid of potassium. The application produced exactly what I wanted, and revealed something else, an exquisite power of intensification and a complete absence of staining. Personally, I can not speak too highly of this feature, its effect upon "muddy" prints being very fine. One to three drops of ten per cent bromid of potassium to the original formula is sufficient, and intensification practically instantaneous. It may be applied locally, but the solution should be diluted and strengthened if required. It acts equally well for negatives, giving a fine purple-black color. The tint produced, with the addition of the bromid, is of a colder sepia.

Platinum bichlorid produces rather a colder and browner tint. The following are some advantageous features of the process: If a print when toned lacks depth, it may be immersed in a bleaching solution of:

Copper sulphate	200 grs.
Potassium bromid	200 grs.
Water (boiled or distilled)	20 oz.

Allow to remain for three minutes, rocking the while. Wash in running water for one minute, and apply any developer used for bromid work. Great intensification, with a return to the original black color, is the result; it may then be retoned.

If, after being subjected to the bleacher, the print is immersed in a hypo bath, the silver is dissolved out, leaving a light sepia image of pure platinum. A solution may be used till exhausted in platinum, but will continue active if more platinum be added. It is advisable in large work to tone by means of a brush, standing the dish in a nearly upright position and allowing the solution to collect in the bottom. By doing this a fairly concentrated solution can be used, rendering the process much quicker and more economical.

As a test for permanency, the following experiments were made: A print, one-half of which was covered with cardboard, was exposed in a window to a southern aspect for two years, and showed no trace of fading. A print was subjected to the following solutions in the order given:

One hour in 50 per cent ammonia. No change.

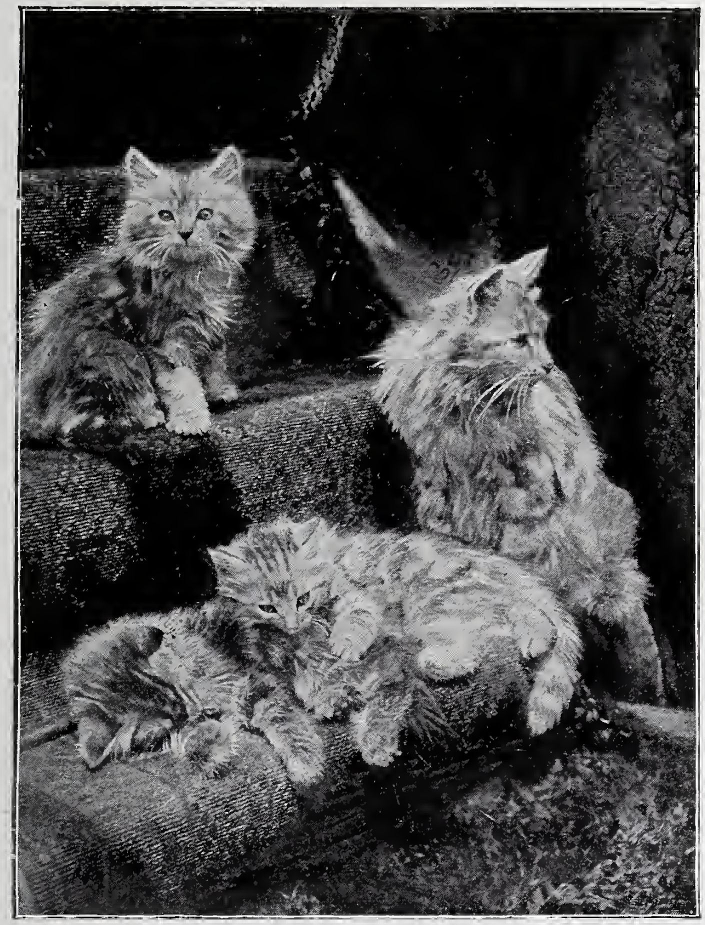
One hour in 50 per cent sodium hydrate. Slight softening of the paper.

One hour in 25 per cent HCl. No change.
" " HNO_3. "
" " H_2SO_4 "
" " Aqua regia (cold). Slight fading.

Another print in hot saturated solution of bichlorid of mercury. No change.

A last and not unimportant feature is a great hardening action on the film, of such an extent that a print may be toned by leaving it immersed in a solution for any time up to four days without fear of blisters; a solution may be heated up to 90° Fahr., the action being thereby quickened. It works equally well with all brands of bromid paper, although toned papers are inclined to give an unpleasant yellow tint to a finished print if the toning is protracted.

In conclusion, I would like to say that this paper is one of many endeavors to raise the bromid printing process, with its illimitable possibilities, to a far greater and more deserving height than it has at the present day attained.



Courtesy of the *Bulletin du Photo-Club de Paris*.

Some thanks are due from me to one of our greatest authorities on photographic chemistry, Mr. E. J. Wall, for information on the subject of the substitution of platinum for the silver in a bromid print.

STAGNATION AND THE ALTERNATIVES.

REAL PROGRESS AS AGAINST REVOLUTION.

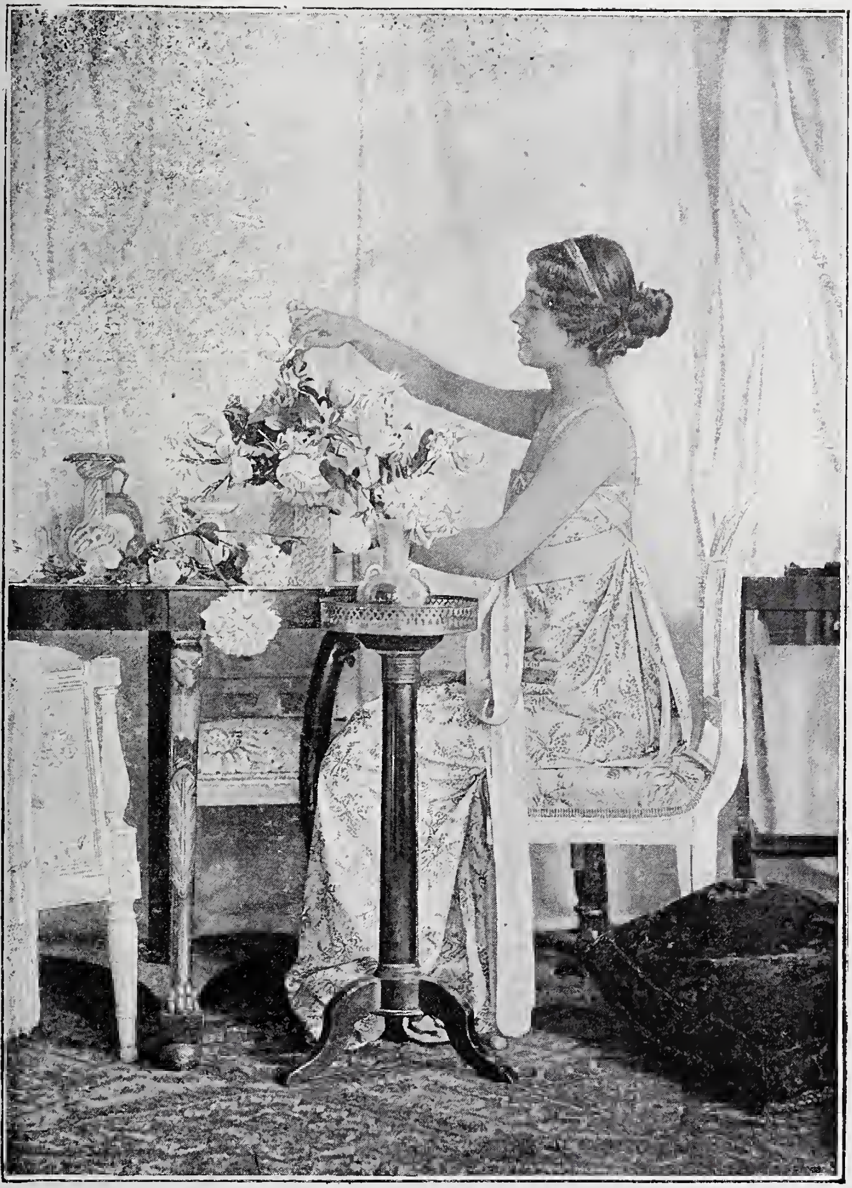
BY THOMAS BOLAS, F.C.S., F.I.C.

The text of Herr Juhl's complaint, that complaint which has brought about an eminently useful discussion, is that "There is in England a complete absence of new blood seeking fresh paths," and he follows on to say that "revolutionaries" are wanted "who through strong individual force create new and valuable things."

We must usually consider the speaker and his environment in striving to find the inner meaning of that which is said, and in this special case it is clear that Herr Juhl is largely measuring the photographic world (and England in particular) by the high example of the Hofmeisters; still this very fact may teach us much that is useful, and lead us to the real springs of progress. The Hofmeisters constitute a duumvirate in which specially strong workers, having not only opportunity, but also indomitable industry, are associated, the special ability of each reacting with and building on that of the other. I may perhaps safely say that the artistic ability of the Hofmeisters would have been almost immeasurably less fruitful if they had not held in their joint hands such a control of the difficult technics of the gum-bichromate process as scarcely any individual, or other association of persons, can command at the present time.

In *The Amateur Photographer* for April 22, 1898 (p. 304), I read an account of the inner technics of gum-bichromate as then worked by Theodore Hofmeister, this account being a distant reflex of a much fuller lecture on this subject delivered by the author on February 3, 1898. I have looked back at the original text of the discourse as printed in the German periodicals of the time, and I find an exposition which is remarkable for thoroughness in technics of the gum process, and in subjects collateral to the technics. Later in the same year Theodore Hofmeister published a book on gum-bichromate, and it is common knowledge that he has since labored very specially and industriously in relation to the technics of this method. Gum-bichromate is one of the easiest printing methods to enter upon, but one of the most difficult to master; indeed, there is no such thing as mastery, because the possible variations are constantly leading to new paths. In addition, the gum-bichromate worker is hampered by all those delicate influences of moisture, temperature, alkalinity, acidity and pigment, which affect ordinary carbon printing.

I mention the work of the Hofmeisters and their very full control of the gum-bichromate process in illustration of my main point; that new departures in art, new advances in art, indeed progress in art generally, are largely dependent on technical advance and innovation. Still this is no new view of mine; it is the view of that great man who was schoolmaster to Alexander the Great, and his view has been, I believe, very generally accepted. Art, by the definition of Aristotle, is "A habit of making joined with reason," or, to put the case more fully, art is a system in which contemplation and contrivance are the mainspring, as they include in themselves all the primary conceptions and inspirations; but after the conception comes the making. Thus the production of new patterns by turning a kaleidoscope is not art within this definition, as there is no reason, contemplation or contrivance. Those primary conceptions which are the mainspring of art are integral to the human mind; they seem to be independent of the age, and to shine no more brightly in our day than in the earliest ages on record, but they fructify differently according as the period gives various facilities for the making or realization. Thus in the golden age of easy life and simple manners, art seems to have chiefly manifested itself in the epic poem rich with vivid word-pictures, these poems being transmitted from mouth to mouth. Potter's clay, the easily worked and beautiful statuary marble, the more refractory bronze, stepped in successively as means of making, and later came the wide choice of methods and



C. Puyo.

Courtesy of the *Bulletin du Photo-Club de Paris.*

materials afforded by modern and present-day technical advances. Technics in all ages have furnished art with new means of expression.

Personally I do not quite like Herr Juhl's aspirations toward a constant state of revolution in art progress, for I can not see art as revolutionary in any sense; true, there may be schools in art, and endeavors to emphasize certain fields of work or modes of work, but these have no analogy to revolution as we know it in history. For example, Doctor Emerson pleaded ably and usefully for so using photography as to represent nature realistically, but it soon became evident that Emerson's nature is the idealized nature of the poet, not the bare nature of the mathematician; hence, it turned out that Emerson's work tended rather to a better and firmer building on the old foundations of idealization, than to anything revolutionary. Again, we find Mr. Holland Day showing the adaptability of photography to the making of that class of very much idealized pictures, which in past days have served so well to supplement the eloquence of the preacher. Men like Emerson and Holland Day are leaders in real progress — they write and they do. They do not make their pictures in a reckless and blind search after novelty as such, but because they see fields for good and telling work. Deeds are the essence of their propagandism, their words being few and to the point. Such men make and mark progress and always will do so.

The Linked Ring, as I understand it, was neither a revolutionary cabal nor a school, but represented a protest against a peculiar and narrow convention as to detail and technical quality, of which convention the London exhibition was the focus. In those days such work as that of Mrs. Cameron would not have been accepted at the London Exhibition; indeed, the exhibition doors were closed to all that did not come within a very narrow range. The Linked Ring unreservedly opened its doors to all, and, as far as I can gather, it never advocated any particular style or mode; it was progressive, constructive, building, helpful to the aspirant, catholic — anything, in short, but revolutionary.

Revolution, as I understand it, and as I see it in history, is the reverse or antitype of useful progress. Revolution always originates with a cabal or group of persons professing the utmost hatred of tyranny, but every revolutionary cabal that has made headway has been under the most absolute dominion or tyranny of a head or leader; in short, the revolutionary cabal represents the most pernicious form of autocracy; especially pernicious when, as usually, associated with professions or boasts of liberty and equality. The revolutionary agitation is seldom or never based on real issues, but rather on an ambiguous watchword or formula, and as soon as the revolutionary cabal comes into power its disintegration commences from within. Occasionally a strong man, one who has great and redeeming qualities like Cromwell, may hold on till his death, but most revolutionary cabals have disintegrated themselves long before the autocrat has, like Robespierre, reached the stage of removing those of his dupes who dare to think or to speak. Ordinarily the revolutionary cabal is best left to itself, when it will eliminate itself. In photographic circles revolutionary cabals often appear on the political side, or in relation to the government of societies, but never on the pictorial side. I only know of one attempt toward a revolutionary cabal on the pictorial side — an attempt to revolt against the growing freedom in pictorial treatment, which came of the Linked Ring and Salon, but in spite of some considerable vulgarity and blatancy on the part of the would-be leader, no cabal was formed. A revolutionary cabal to be successful must ordinarily have no underlying idea; only a formula or a verbal expression.

The wages question has much to do with stagnation in art. He who works for the market can scarcely be true to himself and to his own aspirations. Working for the market (that is to say, so doing his work as to fit it for the demands of the market) means degradation to the artist, whether he take his pay in the stamped currency of the realm, or in the shape of praise and laudation. Those who pay most liberally in money, or in loud-mouthed adulation, are by no means the best judges, yet their patronage so shapes the course of many art workers, that conventions and fashions are created by the patrons rather than by the artists. The true artist takes his own standard, and works to it, and he takes his wages in the form of satisfaction to himself; incidentally he may get other wages, but he does not work with the view of getting such.

This truth to self is the only real and fundamental remedy for stagnation in art matters; for stagnation in the groove of that convention which is bred of commercialism is the most fatal and deadly stagnation of all. As long as artists work for the market, or in accord with that style or convention which the market has made, so long will the style or convention be emphasized, and so long will mental stagnation prevail. When freedom is proclaimed and acted upon (and I take it the keynote of the Salon was freedom), this stagnation breaks down, this worst stagnation in which many are laboring painfully by following a lead. Mere novelty or mere innovation is not necessarily useful progress. The good Augustine in one of his sermons aptly reminds us that "he goeth better that creepeth in his way than he that runneth out of his way."

I see no real stagnation in pictorial photography; indeed, the reverse. I remember the time when the photographs of the year were those of Robinson and of less than half a dozen workers; now we can not count the army of workers. The best evidence against a state of stagnation is the fear of stagnation, those who really stagnate being quite unconscious of the fact.

Still one thing I should like to see — a workplace for very thoroughly following up important branches of photographic technics, and this one at a time; the technic selected being always one upon which pictorial progress might be expected to hinge, as, for example, gum-bichromate. Facility in technics is merely an aid toward the freedom of the worker; and freedom is the essence of art progress.—*The Amateur Photographer.*

THE EYES IN PORTRAITURE.

The life and soul of a good face is so often dependent upon the eyes that it is very necessary to consider this part of the features quite separately. The advanced worker pays them full attention, perhaps without knowing that he does, but the comparatively uninitiated, for whom these lines are chiefly intended, is very apt to spoil many plates and weary his patience, because he fails to recognize the great part in expression that eyes play.

The beginner — or shall we call him the student? — will do well to adopt a few rules, capable, it is true, of much latitude, while since the serious worker shows off his ability most when he is overcoming a difficulty, he naturally has no need for elementary maxims.

When a certain portrait is intended as a picture, then the matter is a simple one. The sitter reads a book, begins to put on a pair of gloves, or plays with a ring, and, of course, has the eyes centered on the action. But very often it is a question of just a head-and-shoulders portrait, where no action is possible, and where the only aim is to secure an artistic record of the sitter's features. Then it is that the student finds the eyes a source of trouble.

Perhaps he has tried, without success, to obtain that countenance which seems to look at us in whatever position it is placed. It is a favorite attitude, and so expressive of life and vigor that we are often tempted to strive for it. The sitter's forehead should not be placed quite parallel to the front of the camera, but at a small angle, and his eyes should be turned toward the lens in such a way that one of them looks slightly — very slightly — over the nose. The head should be, for preference, on a level with the camera; but this I do not consider an absolute necessity. If the forehead is parallel to the camera-front, and the eyes look straight at the lens, the sitter almost invariably assumes a stare, and consequently spoils the portrait.

The semi-profile gives another favorite position for the eyes. In this case, again, staring is frequent. A really good preventive is to hang a medium-sized bill in some position where the sitter can read it whilst the cap is off. The printing on the bill should not be too large, and should contain more words than could be read at a glance. This does not allow the sitter to become too conscious of his position, and also finds work for the eyes.

As a rule, our faces are not quite symmetrical; one side is better than the other, and perhaps one eye is bigger than the other. Therefore full faces are not usually advisable. At the same time it must not be forgotten that both eyes should figure in a photograph of anyone with fine eyes.

Various expressions call for definite positions of the eyes. Do not let them adopt a pious expression, or one indicative of pity, unless the sitter and the surroundings are suitable. The upturned, pleading eye has a very limited use, as only Sisters of Mercy, choirboys and a few others show it off to satisfaction. For people in everyday attire it is not to be recommended. Fancy expressions will not do for men. In their cases, then, the effective positions are almost restricted to semi-profiles, and the one first described. The reader may suggest that the profile position is still open to them. As a reply, it must be mentioned that very few sitters can affect an unconcerned expression while being taken in this attitude. They become far too conscious of their surroundings.

The question of lighting is one that requires a few words. In the first place, a strong top light must be avoided, or else the brows will cast a shadow over the eyes, making them appear sunken and dark. Secondly, fair eyes must be shaded from too powerful a light, or loss of expression will result.

Never tilt the head so much that the whites, on either side of the iris of the eye, are joined in the photograph. The look that this will depict is one that suggests vacancy.

Whether to retouch any portion of the eye or not is a difficult matter to decide, and a still more difficult matter to perform. At all events, the white should not be made to print whiter, unless the sitter had unusually peculiar eyes, while to tamper with the iris probably means to rob it of its brilliancy and make it appear as though it were modeled in colored clay.

Of course, there are many photographs to be seen in our magazines and shop windows that seem to disprove some of the rules laid down in this chapter. They are either the work of skilled hands or the photographs of beautiful sitters. In both these cases the operator can, unlike the student, afford to ignore the everyday rules of posing.—*Stanley C. Johnson in The Amateur Photographer.*

TO IMPROVE NEGATIVES AND LANTERN SLIDES.

A combined intensification and reduction is recommended by Prof. H. Kessler for the improvement of lantern slides, or even negatives which are foggy or flat. The negative or lantern slide, when dry, is bleached completely with bichlorid of mercury, washed for about a quarter of an hour, and then blackened with a solution formed of sodium sulphite 50 grams, metol 5 grams, water 500 ccm., until the blackening has penetrated through to the glass side. Then wash again, and reduce with the ordinary Howard Farmer reducing bath, composed of hyposulphite of soda and ferricyanid of potassium, until the picture has become clear. Finally wash thoroughly. The above blackening solution is given in place of the usual sodium sulphite or ammonia, as otherwise the intensification would entirely disappear in the reducer.

Do you like to swap or trade? Any kind of an exchange can be made through THE HOME BAZAAR.

ARTISTIC MOUNTING.

The mounting of the photographic print is perhaps the most neglected detail of picturemaking. In fact, many beginners think the battle is won when a satisfactory print has been made, and that it can be easily mounted on any of the prepared mounts to be had at a supply store. This careless view of the matter has spoiled many a good attempt, and it is the worker who spends the most time deciding how best to mount his print that wins the prize.

Mrs. Kasebier. Courtesy of the *Bulletin du Photo-Club de Paris.*

Every print has some dominating tint or color. The ordinary glossy papers give brown and purplish tones; platinum, bromid, Velox, Dekko, Cyko, and all the gaslight papers give blacks, whites and grays; there are also papers giving blue, green and sepia tones. The proper mount for any print will either harmonize with this dominating tone, or contrast with it along the lines of complement.

Mounting in harmony is much more common than mounting in contrast, as it is easier, and the results are usually more satisfactory. Using this method, the mount which continues the predominating tint of the print is the mount to use. With this principle in mind, the way is clear and the beginner ought to avoid such errors as mounting black and white prints on brown and green mounts, or prints with purple tones on gray mounts.

Prints made on platinum, bromid, or any of the gaslight papers, may be mounted to advantage on black or gray cards of any depth. Platinum sometimes looks well on pure white, but generally it is richer on black or dark gray. Prints on any of the gaslight papers, which show greenish or brownish blacks, may be corrected in mounting by the use of greenish or brownish mounts which must be carefully selected with reference to the print.

While for general usefulness in mounting black and white prints there is no surface equal to Collins' "Carbon Black," a careful study will show that other mounts may at times be used to advantage. It is well to lay the print on a number of different mounts to try the effect of each. In this way the most effective shade can nearly always be selected at once. A very flat print can very often be made to appear more brilliant on a jet black mount, while the beauty of a soft print, without pronounced high lights or deep shadows, will be greatly enhanced by a medium gray mount of about the same tone as the print itself. The defect of a pure white sky can be partially rectified by mounting the print on white filter paper or ribbed charcoal paper, while the same print on gray would assuredly be very distasteful.

There are no color contrasts to black and white; each contrasts with the other, and between these are the whole list of grays. The amateur will do well to mount his brown, sepia, red, green, blue and other toned prints on mounts continuing their predominating tone, unless he has at least a primary knowledge of complementary colors.

Contrast mounting is largely a matter of dangerous experiment. It is always well to avoid the brighter contrasting colors, although a bold, contrasty print should be given a strong backing in the mount, while a more delicate print with fine detail should be more carefully handled. If the result is pleasing to the eye and displays the print — not the mount — it is a success.

As to mounting surfaces, the prepared mounts, especially those embossed with various designs, should be avoided as they attract attention from the print and are not artistic. There are many beautiful dark mounting-boards and papers which are much better. The mounting surface should never be glossy, as the glossy surface reflects the light which should be absorbed and takes the attention from the print. The "cover-papers," used for pamphlet covers, make fine mounting surfaces, and can be secured in practically unlimited range of color and tone. Parchment, ragged-edged linen, rue and Japanese papers are frequently useful for very delicate effects. Nearly any large printer is prepared to furnish these papers in sheets about 20 by 25 inches, which can be easily cut to any size needed.

The size of the mounting-paper is an important factor, and a matter of individual feeling. In general, a large print requires a smaller proportion of space for the mat, as compared to the print, than a small one — 10 by 12 inches is a very useful size for 4 by 5 and 5 by 7 prints, although each print should be studied and the mounting carefully planned for its special needs. The tendency is usually to use too small mounts. This is especially true of exhibition-work, as large mounts isolate the prints from each other, allowing each to make its own impression.

Formerly it was the custom to mount in the middle, but a print will nearly always appear to better advantage if mounted somewhat above the middle of the mount, because the " weight " of a picture is usually at the bottom, giving the effect of being placed below the middle. Carbon, gum, platinum and all prints on heavy paper may be hung on the mounts by applying a little paste at the corners. Thin prints, if at all inclined to curl, must be pasted down. A good mounting-paste should be applied with a brush, using as little as is strictly necessary, but rubbing it well into the paper. A print roller is necessary, and the print, when in correct position on the mount, should be covered with a clean blotter and rolled into firm contact. The mounted print will dry nearly flat if kept between blotters under pressure for a few days. If a perfectly flat mount is desired, it can be secured by mounting on the back another piece of paper the same as the print.

Phil M. Riley.

TO REMOVE STAINS ON HANDS.

1. Stained finger nails.— Rub with piece of ink eraser.

2. To prevent rubber stalls sticking to fingers, rub in French chalk after use.

3. To keep the hands soft and white, rub in a little new milk before developing.

4. Pyro stains from the fingers.— Rub with ammonium persulphate crystals, or with lemon juice.

STEREOSCOPIC VISION AND LANTERN PROJECTION.

Of late years there have not been many important improvements made known in regard to stereoscopic matters, and now, as this class of work is coming into such prominence again, it may be opportune to give to stereo. workers the results of recent interesting experiments. In the first place, I might mention the comparatively well-known fact that many persons possess the gift of seeing stereoscopic slides without the aid of any instrument whatever. Those who do not possess the gift may, by the exercise of a little patience and practice, acquire it. It is a little difficult to give particulars as to how it is done, but perhaps the following is the simplest. Focus the eyes on some distant object, say twenty or thirty yards away, and then suddenly interpose the slide between the eyes and the distant object at ordinary reading distance from the eyes. If this is done correctly three pictures should be seen instead of two, and the center one will be stereoscopic. The same result may be attained by simply staring at the slide until the two pictures begin to run together and finally coalesce. Pictures mounted close together, say two inches from center to center, may be tried first, gradually increasing the distance until an ordinary slide can be easily manipulated. I know one person at least who can, without

F. Michelis. Courtesy of the *Bulletin du Photo-Club de Paris.*

any difficulty, make two half-plate prints coalesce.

In the course of some experiments recently I discovered a very simple means of seeing stereograms in relief by the use of a small prism. It is a well-known fact that when a prism is placed before the eye it deflects the course of light, and makes the object looked at appear in a different position altogether to what it really is. The prism I am writing about is one of an angle of twenty-three degrees, and about one inch square. If a stereoscopic slide is held at usual reading distance, and then the prism be put in front of one eye, with the thin edge toward the nose, it will bring the pictures together instantaneously, the middle one standing out in relief. This is a useful and inexpensive piece of apparatus, which can be carried in the waistcoat pocket, and is available at all times. For examining slides in magazines which are printed from half-tone blocks, it is far better than a stereoscope, as it does not magnify the screen lines. This, with any ordinary instrument, has always been a disadvantage.

The prism has another peculiar property. If a pair of prints have been wrongly mounted as regards right and left they may be seen correctly by holding the prism to the eye with the thick edge toward the nose instead of the thin edge, as with a properly mounted slide. It makes the picture somewhat smaller, but the stereoscopic relief is, nevertheless, perfect. This, I confess, is a little more difficult to do than to use the prism in the correct way. This property comes in very handy when one wishes to see the negative in relief before printing, or a print from the same before being cut and transposed.

One other use for this little instrument, and this article is finished. It has been the dream of stereoscopists for years to get a projection by means of the optical lantern which would give stereoscopic effect. Up to the present, however, the nearest approach to this desirable end has been the taking of the two halves through different colored screens, and then viewing the projected picture through colored spectacles to match the screens through which the stereoscopic transparency had been taken. Now, if a transparency be made by reduction from the half-plate stereoscopic negative, so that both halves are on the usual lantern slide, these two may be projected side by side, so that a very greatly enlarged stereoscopic slide is seen on the screen — the size being only limited to the size of the sheet. Then, by taking this small prism and holding it exactly the same as for an ordinary slide — but, of course, standing at a convenient distance from the picture — the two are made to coalesce easily, and the slide in all its glory is seen even up to life size, the whole standing out in perfect relief. The application of this discovery is obvious. Although, perhaps, not practicable up to the extent of showing such lifelike pictures to hundreds of observers in a drawing-room or clubroom, it is quite feasible, as the prisms could be got so cheaply as to enable every person to be supplied with one.

R. BORROW.

THE Royal Photographic Society of Great Britain announces that the forty-eighth annual exhibition will be held from September 24 to October 31. Full particulars from the secretary, A. W. W. Bartlett, 66 Russell square, London, W. C., England.

NEW YORK amateur photographers, who reside up-town, may not be aware that since 1901 a very practical club has existed at 239 East One Hundred and Fourth street, to which the present members will be very glad to have them belong. The club's first exhibition took place in 1902, and arrangements are now being made for the second at no distant date. The members of the club give special attention to beginners and patiently educate them in the details of practical work. Those interested should either write to the secretary or call at the clubrooms.

The Photo-Beacon Exposure Tables are guaranteed corerct. Price, 25 cents.

THOUGHTS AFTER HOURS.

Every little while somebody springs up and says "Amateur photography is dying out," and the wise ones nod their heads and say it must be so, because they do not see so many out with cameras now as they used to.

When the price of bicycles came down so that anyone might own one, it was sometimes almost impossible to cross the street without coming into disquieting contact with one. Father, mother, sister and brother each owned their own machine, and used it as if it were necessary to salvation. It was a common sight to see the staid man of business masquerading around the office in checked knickerbockers and elkskin shoes.

There were bicycle races, bicycle shows, bicycle diseases and bicycle pandemonium! Scientists got into disputes over the date when horses would become extinct, and every body who could rent a place went into the bicycle business.

But what a change in the last few years!

Some people still ride, because they find the wheel a real necessity, but the faddists, who rode because it was the fashion, have long since consigned their machines to oblivion, and are now reveling in the innocuous pleasures of ping-pong.

It was much the same with photography. "You press the button," etc., advertisements started the mob into the photographic shops, and in a comparatively short time, a person who did not own a camera was looked upon as an eccentric, unworthy of a place in a progressive community. With one accord the mob started in to "boost" art, and art, being delicate, could hardly stand the strain.

But, after a while, the mob discovered that photography required an effort, and it was chagrined. It found that it was necessary to stand around in a darkroom, that smelled unpleasantly of kerosene oil, when it might have been out parading in its new $2.50 hat. And the critics were unkind, and the materials cost such a beastly lot, and it was a bother anyway; so the camera was put away on the top shelf, and art breathed again.

Courtesy of the *Bulletin du Photo-Club de Paris.*

And that is the reason we do not see so many walking the streets with little black boxes in their hands.

But if the thoughtless button-pushers have left the ranks, they have made room for an earnest class of workers, possessed with a desire to do something for photography, no matter what the effort, or what the cost. The advent of these enthusiasts has produced a wonderful effect, and photography, long lying dormant, has received a new impetus, which bids fair to carry it into the highest realms of art.

There is good in all things, and we owe thanks to the man who penned the advertisement before mentioned, because it awoke interest in a then little-practiced art, and brought to light many geniuses, who otherwise would have lived their lives in vain.

Hail, then, the amateur photographer! The artist who uses his instrument as the painter uses his brush — merely as a tool — to put upon paper what his eye, guided by that indefinable something we call art-sense, sees in nature. Steadfast in his faith, striving ever to realize his ideals, satisfied never; overcoming difficulties with an unshaken will — he is the one we are looking to for the joining of art and science, and he will not disappoint us.

Amateur photography dying out? No; not while nature lasts or art lives!

All progress comes through evolution, and the scientific amateur of the present is a striking verification of this principle.

* * *

Every manufacturer at present seems to have the same burning desire to make his cameras as small and light as possible, without having them assume balloonlike tendencies.

The photographers have been crying "compactness! compactness!" and they are getting it with a vengeance!

Compactness is all right, but it should only be thought of after stability, ease of manipulation and rigidity have been attended to. We have seen cameras so delicate that we were really afraid to insert the plateholder for fear of breaking the back.

We Americans have a habit of overdoing things, but after a while we take time to sit down and think it over, and sometimes we see our error and make it right.

A young man, who spends about $2 a week on supplies and gets about 10 cents worth of results, recently told me that he had decided to trade his camera for a dog. He said he knew the dog would be a trouble to him, but he would at least have the satisfaction of hearing him bark. He said that in his experience, photography had been a dull, dark failure. I asked him if he had ever received any instructions in the art. He said the dealer had told him things when he bought his camera.

"Ever read any books on the subject?"

"No."

"Never subscribed to a photographic magazine?"

"No."

I at once advised him to make the trade.

It seems so strange that people rush into photography without getting some idea of what they are undertaking. They would not think of building a house without first learning the principles of architecture, and yet they expect to make good pictures by simply following the hurried directions given them by the dealer. The public libraries have a collection of standard works on the subject, several excellent magazines are published at a low price, photographers are generally willing to explain the mysteries for a consideration, and yet — and yet —

Only the other day a gentleman, whom I had persuaded to subscribe for a magazine, thinking it might help him in his difficulties, met me on the street and thanked me for making the suggestion. He said that one article on developing had proved invaluable to him, as it showed where he had been making a mistake, and suggested the remedy.

In direct contrast is the case of the man who does not subscribe, because he says the magazines do not give their readers enough new ideas.

Editors are always on the lookout for new ideas, and will pay liberally for the same, providing they are of practical value. Photography is in the developing stage. Science advances by slow and steady steps. Every new theory must stand a rigid test before it is admitted as a principle. We are learning more about the art-science every day, and we have only begun the study. We must be patient. Thousands are working on new formulas, apparatus and improvements, and they will all give the results of their labors to the world in due time.

The editor knows you are waiting for something new and he is anxious to give it to you, but he must first get it himself. WALTER G. TEUTON.

TO DULL BRIGHT SURFACES OF MACHINERY, ETC.

Make thin cream of white lead and turpentine, add lampblack to make a gray tint, and then one-sixth the bulk of gold size. Paint over, and remove afterward with "cotton waste" dampened with benzine or turpentine.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

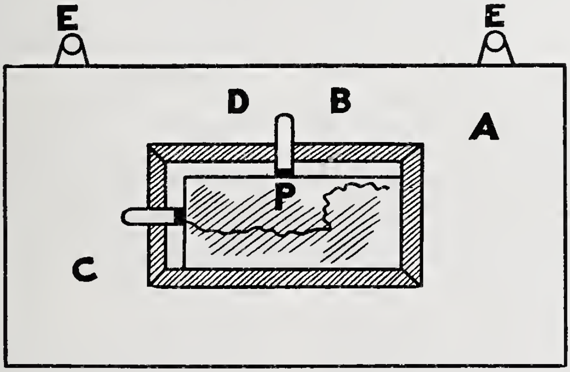
A SIMPLE CLOUD-PRINTING DEVICE.

The following method for printing clouds on lantern slides or transparencies I believe to be new— at least, I have not seen the device described before — and, as it is exceedingly simple, should prove a valuable help to those who are possessed of an enlarging lantern and find the usual methods in use not so easy in working as they could wish.

The negative from which the foreground part of the picture is to be made is taken and a transparency made from it in the usual way in an ordinary printing-frame, the sky portion being kept shaded during printing as much as possible with a card or duster, to insure a blank white sky in the positive. This is developed, washed, fixed and washed and dried as usual. When thoroughly dry, it is placed in a frame made as follows, which, to make more clear, I illustrate with a rough sketch:

For 4 by 5 size, a perfectly flat piece of board is taken of about half an inch in thickness and 10 by 12 inches square, and about the center of this four strips of wood are glued or screwed, making a frame which will hold loosely two plates dropped in when the board is in a horizontal position. Now one more detail, and the board is complete. This board, with the plates, is to be placed in a vertical position, so to prevent the glass from falling out it is necessary to cut on two sides of the frame slots for two pegs to be inserted, which should work stiffly, so that when both are pushed against the edges of the plates in the frame they keep the latter hard against the two opposite sides; thus there is no fear of breakage. I especially advise the use of rather large pegs, which should be tipped with rubber, as plates vary as much as a one-sixteenth inch in size very often.

In the following sketch is shown the complete apparatus. A, the large board, on which the frame B is fixed, with C and D, the pegs which are pushed in on the edges of the plates P.



It is now necessary to hang this upon the easel of your enlarging apparatus, having previously dropped in the frame an exposed but undeveloped plate for focusing upon. In the carrier of your enlarging lantern put your cloud negatives. When you have got a clear and sharp image on your white undeveloped plate, cover your lens, and substitute for it a plate from the box, face upwards as before; then take your transparency with the blank sky, and put that on top of the live plate, film down. Tighten up your wedges, hang up your board — in the same position, of course, as before — and expose, shading the landscape portion roughly with a card. This gives you a positive cloud picture, which will have the clouds only in such places as were not protected by the positive. It now only remains to dry the cloud positive, and then bind it and the foreground picture together in register, when you have a combination from which can be made an enlarged negative of any size whatever.

H. P. C. Harpure.

SUCCESS IN SIMPLICITY.

Practice, the average amateur will find, discounts theory several points. A multiplicity of formulæ, directions, etc., that make up so many handbooks on photography are all right, but the beginner is apt to become confused in his effort to sift from this large amount of straw, the few grains of wheat. He needs a few fundamental principles upon which to build his superstructure, and the theoretical part of amateur photography will come naturally and he can delve into it to his heart's content later on, and then will be time to reconcile the theory and practice of the art.

One is too prone to think himself infallible, especially so when the art of photography is new to the amateur and he imagines that what he does not know about the art is a back number. It never dawns upon some that their failures may be due to an error in judgment on their part, and the plate, the camera, the developer, the paper, the gold bath, the fixing bath or some other element is in the wrong, and so rest the blame of a poor negative or a poor batch of prints upon some one of these things, when in reality it may be the error, neglect or ignorance of the operator. Ninety per cent of the cases of failure with the amateur may be laid at his door, for in these days of pure and carefully compounded chemicals, superior plates and admirable paper, failures are oftener due to his error in judgment or his neglect or ignorance of some principle that is imperative in making successful pictures.

The reader will say the foregoing is no doubt true, but what remedy can you offer for the evils. A panacea is not known in photography, for failures will at times occur, but these failures may be reduced to a minimum by finding a brand or formula that you can work successfully and then *stick to it.* A rolling stone gathers no moss, we are all told, and if true in other avenues of life, it certainly is in the work of photography. The amateur who is trying something *new* every week finds himself confused and unable to work successfully any one plate or paper. The suggestion I would offer is to give any one of the many brands of plates on the market a thorough trial. Test them under various conditions, and, when failures result, ascertain from the maker whether it is yourself or the plate. When you have mastered the intricacies of that brand of plates and find it works to your satisfaction, stay by it. You may need other plates of greater or slower speed for certain grades of work, you may have use for the ortho, iso and non-halation plates, but I am speaking of the ordinary dry plate. If you understand this brand and find you can bank your judgment on it, use that plate exclusively. The same may be said of a developer. When you find a formula that works to your satisfaction and gives you negatives of the desired density and makes good "printers," adopt that formula, as you are liable to find in trying others that you do not understand their peculiarities. The same of paper. Get a couple of good brands — say a printing-out and a developing paper — so you will be able to work day and night, as some of the "fiends" do. Adopt these brands and a good developing or toning and fixing formula and stay by them.

But I would not have the beginner remain stationary by any means, for if photography means anything it means a growth, and after these simpler things have been mastered and he feels that he has a firm foundation and something that he can rely upon and fall back on, he can branch out and take in the finer details of the art. With this growth will come the desire to attempt larger and better things, and he will grow into the advanced stages of photography naturally and apparently without effort, for, having mastered the rudiments of photography, these things come to him gradually, and he grows into an understanding of many things that, before his mastery of the first principles, would have been an enigma.

We often read of doctors of various professions and masters of certain arts being turned out of some institution in an incredibly short time, but in the school of amateur photography, in which you are your own instructor, there are no short cuts. The thing must be mastered by degrees, and with simple formulas and an understanding of the first principles of the art mastered you are on a splendid way to later success in all the possibilities that this delightful pastime offers the amateur.

F. E. Foster.

MORE EXPERIENCES.

My negatives being nearly all time pictures, are a little over-exposed rather than under-exposed. Consequently, when trying Velox paper, a large percentage of the prints were unsatisfactory until I encountered " Carbon Velox."

This brand of the " regular Velox " gives me good results every time.

A year or more ago I noticed an article in a friend's photo-paper recommending the use of white sugar in M. Q. developer to retard its quick action, and I have followed the suggestion with good success.

For a four-ounce (4 oz.) solution of M. Q. developer I use three (3) teaspoonfuls of sugar, shaking all until thoroughly dissolved. In printing incline to under-exposure, then develop as far as the prints will go, and you will have beautifully clear yet soft pictures. In this way you have time to watch the upbuilding of the image, and can easily tell when it has reached the desired point. Toward the last some prints will take two and three minutes in coming up.

The sugar does not seem to weaken the chemicals. I develop forty prints in the four-ounce solution. Having a room with buff holland shades, and usually doing my work early in the morning at a west window, I do not need to use any bromid, although it is said to act harmoniously with the sugar.

The farther we go in photography the more we learn to simplify. Formerly my every negative had a separate dish in washing; now I place six or eight negatives side by side in the bottom of a large wooden tray (home-made). Place them so the water runs into the tray with gentle force, and, in an hour or more, they are washed ready for drying.

After having decorated several wash-towels with ineradicable deep purple and brown stains from first and last washings of prints, I find the trays are much better for keeping the prints in circulation when washing, and are also easier to handle.

My darkroom is a large closet belonging to a spare bedroom. It was without a door, the arched opening being draped with heavy portieres. They did not darken enough, however, so I sewed two long breadths of calico together, papered them with two thicknesses of brown paper, and tacked it above the archway for a curtain. When not using the darkroom the curtain is rolled up and tied above the arch.

Some of our household find the odor of the little ruby lamp very unpleasant, so we sawed a seven-by-nine window over the work shelf. On the bedroom side a small shelf was nailed to hold an ordinary lamp or candle, while the window was papered inside with dark red paper. And now I do not worry about the light going out or the lamp exploding if detained long in the darkroom.

Why can't we have a question-box? There are innumerable things we want to know. I wish to ask a question right now.

In describing the process of " Reduction," in the Photo-Beacon of November, 1900, W. Marshall said to make the final wash " thoroughly." Now, how long does he mean? I found, by bitter experience, that washing thoroughly in intensifying meant fifteen minutes instead of an hour and a half. We can not take anything for granted, so please tell us minutely even the simplest things.

Adelaide Beaty.

PACKING EXPOSED PLATES.

In packing exposed plates never put newspaper or any paper with printed matter between them. The letters will be seen all over the negative. Pack either film to film, tying the pile of pairs up in brown paper or each plate in a pair of envelopes of purely black paper.

GLUE PRINTING.

Herr Fleck, of Munich, gives the following modification of this process, and which gives juicy shadows, rich half-tones, and pure whites. The paper recommended is either the well-known scraper boards or the pyramidal grain paper:

A

Cooking gelatin	3 parts.
Arrowroot	5 parts.
Water	150 parts.
Borax	1.5 parts.

B

Carbonate of soda	2 parts.
Powdered resin	1.5 parts.
Water	75 parts.

Boil both solutions in a water bath with constant stirring, and then mix and filter; this forms the preliminary sizing for the paper, and when this coating is dry the following sensitizer should be applied:

Good liquid fish glue	1 part.
Clarified egg albumen	0.5 parts.
Potassium bichromate (five per cent solution)	3 parts.
Tube color	½ parts.

Rub up the color with the glue and albumen in a warm mortar, and add the bichromate. Printing and development are effected in the usual way.

McMURRAY, WASH., April 1, 1903.

F. Dundas Todd, Esq.:

DEAR SIR,— Knowing that you were on the lookout for anything photographic that might interest your readers, I will send by this mail samples of some of my recent work that may be of use to others. A couple of these might be of use in the study of botany. Taking a perfect sample of any maidenhair or other ferns and leaves of any description, one can get good and interesting outlines, etc., by printing direct onto Velox or other paper without camera or negative, simply by using the ferns or leaves as a negative and treating as though print were from regular negative. A still more interesting way is to procure green paper, say artistic tints of note paper as near the natural color of the ferns or other leaves you are to work with; then, after moistening, float it upon a sensitizer (for instance, Soline, manufactured by Burke & James), when, after drying, it will be ready for printing. The print after washing should be toned in a gold toning bath and fixed. After a thorough wash it is ready for mounting. Another, which I have not tried, but which I am confident would work and which I shall try as soon as convenient, is to take red paper and work by the same process for a "red sunset."

Yours truly, E. K. SMITH.

EDITORIAL TABLE.

FROM the Illinois College of Photogaphy, Effingham, Illinois, we are in receipt of a copy of the program for the season 1903-'04, which is a very complete guide to the course of instruction given at this, the only institution of its kind in the world. The illustrations in the book, and they are numerous, aided by the reading matter, give one a very excellent idea of the nature of the instruction given at the institution, and everything that forethought and ingenuity could devise to make good photographers appears to be provided. Copies of the booklet will be sent on request.

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SOME DEFECTS IN NEGATIVES.

In the March issue I took occasion to deal somewhat at length with the problem of dirt, and I was very much pleased to find that I had touched on a subject that proved more than usually interesting to many readers of the journal, if I am to judge by the many references to this article in my daily correspondence. Requests were made that I go into the subject even more fully, because many of my readers stated that they had found other troubles whose cause was evidently not covered by my remarks.

At the recent convention in Milwaukee of the Wisconsin photographers I had an opportunity to examine a very interesting set of negatives exhibited by the M. A. Seed Dry Plate Company. There were about eighteen in all and they showed a great many different kinds of defects, and, after going over them very thoroughly, I came to the conclusion that notwithstanding the variety of the trouble, it all could be summed up in one word — dirt — that is to say, matter out of place. For instance, the very first negative on the frame exhibited two short streaks suggestive of hairs, with a light halo round each of them. The cause here of the defect was evidently two small pieces of fiber containing moisture that had settled on the film, and the moisture tended to make that part less sensitive.

The next two negatives exhibited irregular-shaped spots, about the size of a dime, which evidently had not been sufficiently developed. The demonstrator, who ran up against this trouble, had quite a little difficulty in chasing it down, but he was aided in his investigations when he learned that only one plate of each day's batch showed the trouble, and that was invariably the last one developed. On catechising the photographer, he found that, like most others, he was in the habit of placing his exposed plates, film down, into an old plate box and then developed all his exposures at the end of the day. The last plate developed was, of course, the first to be exposed and the one that lay on the bottom of the box. This was examined and it was found that the photographer had carelessly placed the box on some drops of water which had been absorbed by the cardboard, and the film of the plate being down, naturally absorbed some of the moisture and prevented the action of the developer for some little time. A plate film should never be allowed to come in contact with any organic substance.

The fourth negative showed some dull, hazy, indefinite markings, rather suggestive of the pictures that one sees of various kinds of bacteria which were scattered irregularly all over the plate. The photographer who produced this result found the defect a very common one and investigation showed that he was in the habit of placing the developed, but unfixed negatives, into a dish of water which, unfortunately for him, was rather impure, as it contained particles of organic matter, such as is found in all river supplies, especially in the springtime of the year, when the freshets are on and decaying bits of vegetation are being carried along in the current.

The next plate had a glorious crop of "tadpoles," such as I described in my article in the March issue. I think there must have been about a thousand of these on this 5 by 7 plate, and, after what I said in my previous article, it will be understood that the cause of this defect was particles of iron in some of the baths.

The next defect exhibited was the opposite of this and consisted of many hundreds of clear spots on the negative. This is a trouble that I come across in my own correspondence very frequently and they are usually located either at one end or one side of the plate. The developer apparently has not acted and the problem is to find out the reason why. The most frequent cause is the use of insufficient developer, which leaves part of the plate uncovered. The photographer, noticing the bare spot, gives the tray a sudden rock to carry the solution over the plate and apparently succeeds in his efforts, but at the same instant he generates a very large number of minute air bells which protect the gelatin film from the action of the solution for a little while and thus the spots are produced.

Very similar to this defect is another where there are hundreds of spots, but different from those mentioned in the last paragraph, in this, that they are not clear, showing that the solution has acted at least a little. The developer in this case was made with water containing lime or some such mineral, and a precipitation resulted. This deposit gathers at the bottom of the bottle and is stirred up each time some of the contents are withdrawn, but of course the greatest bulk of the sediment comes in the last bath that is made from the solution. It settles on the gelatin film after a while and prevents further action of the developer.

A 4 by 5 plate taken from a magazine camera, such as was very popular two or three years ago, exhibited a rather unique defect. The plate had evidently not been exposed and yet it was covered all over with a cloudy defect, as if light had acted in a very irregular way on the silver. In order to understand the cause of this trouble, one must recall the method in which the plates are handled in such a camera. They are usually put into metal sheaths and loaded one behind the other into the instrument, so that the film of each plate is very, very close to the metal of the holder in front. In handling the sheaths, the fingers deposit moisture containing salt and similar substances on the back, and in warm, moist weather one can readily see that the impression from these fingermarks will have every chance to affect the sensitive film in front, in fact, the pressure in the box will not infrequently force the plate face into contact with the back of the holder in front, and thus transfer some of the moisture to the film.

The twelfth of the series reminded me very much of a negative that went the rounds quite a number of years ago. A photographer in Ohio one day set out to make a snap-shot of an eclipse of the sun, and when he developed his negative he found an impression on his plate that suggested that the sun had been traveling swiftly in every possible direction, trying to see if he could outline a tangled skein of wool or had got on a most glorious drunk and could not keep the straight path more than one-hundredth part of an inch at a time. I remember that in my opinion the cause of that trouble was an imperfect shutter which left a little pinhole in the very center, and the photographer in aiming at the sun wabbled his camera around considerably and thus permitted the rays to travel over a very considerable expanse of territory before the snap was made. At first blush I concluded that the plate under consideration was a twin brother of the one from Ohio, influenced probably by partaking of some of the "beer that had made Milwaukee famous," but the demonstrator in charge informed me that the actual cause was a slow-burning flash-powder. The unconsumed particles were drifting all over the room, going off at their leisure and shooting hither and thither as they exploded. The photographer, after making the exposure had not had opportunity to close his lens and so got the full benefit of the pyrotechnic display that happened to occur within its field.

The fourteenth negative exhibited some old friends. These consisted of irregular-shaped, sharp-edged, clear spots, and were due to the scum on the surface of an old developer. The next negative presented defects that I meet almost every day during the summer months. They consisted of round clear spots with a thickened margin, and often have a dark spot in the center. These are caused by slow drying in hot muggy weather, which produces decomposition of the gelatin. Little bubbles of gas form between the film and the glass, and as they expand they force up the soft gelatin into little blisters, which keep on expanding like a toy balloon, until they reach the critical stage when they burst. The film immediately contracts, leaving the central area clear and, of course, the deposit around the edge thickens the film. The remedy here is to dry the plates as quickly as possible in a cool atmosphere, under the influence of a good draft. I find that the best way for the average individual is to set the plates in a drying rack in the window of a basement, so as to get all the advantage from a current of air which has been cooled in its passage in the lower part of the house. Where a current of air from a fan is possible it should invariably be used.

F. Dundas Todd.

The photographic fraternity will be interested in the fact that, by mutual agreement with the Actien-Gesellschaft fuer Anilin-Fabrication, Berlin, the Berlin Anilin Works, of 213-215 Water street, New York, have been appointed sole importers to the United States and West Indies, for their celebrated "Agfa" photographic articles. These include the developers, Rodinal, Imogen, Paramidophenol, Amidal and Eikonogen, the last two also put up in cartridges, and their specialties Agfa-Intensifier and Agfa-Reducer. It speaks well for these articles, that in the past they have been introduced into this country entirely on their own merits.

C. H. Gardner, Port Townsend, Wash.

FIRST PRIZE.

PICTORIAL COMPETITION No. 61.

It is very difficult to get children to take the medicine that is supposedly good for them, and it seems to be often more difficult to get the readers of this magazine to work industriously at such competitions as deal with purely abstract principles. For several years I have persistently included in the list of competitions two subjects that I believe to be very highly educative. I refer to those that deal with branches of a tree with and without leaves. My reason for so doing is that I know nothing better, excepting flower stalks, for imparting the principles of composition than to take a branch of a tree and utilize it as a means of dividing a given space into minor subdivisions.

With a subject of this sort we are very largely free of sentiment, color, light and shade and tone value, although, undoubtedly, the two last-named play a considerable part, but the essence of the whole matter lies in arrangement. Composition, as we now view it, consists in breaking up a certain sized area into a number of smaller spaces by means of natural objects, and these spaces must be of pleasing outline in themselves and be varied in both size and shape. This I believe to be the essence of composition, and it would pay every photographer to make a study of branch and flower subjects for many months, because in that time he would learn more about arrangement than he would do by years of effort in general work. It is rather disappointing, therefore, to find that year by year only about a dozen take hold of this subject more or less seriously.

Two of the prize-winners inform me that they find this competition the very hardest of the year and acknowledge that they had examined hundreds of twigs while making their selection, and that dozens were placed in front of the lens before the final choice was made, and they acknowledged how much benefit they derived from the persistent endeavor with the subject.

The judges made the following awards:

First prize — C. H. Gardner, Port Townsend, Washington.

Second prize — S. D. Lyle, 6612 Lowe avenue, Chicago.

Third prize — George Alexander, 333 Forty-first street, Chicago.

PARTICULARS OF WINNING PICTURES.

First prize.— Made in April, 1903, at 11 A.M., with the front combination of a plastigmat lens, exposure 15 seconds, stop F-16, on Seed L. O. plate with ray filter. Printed on Eastman's sepia paper.

Second and third prizes.— No particulars given.

SPECIAL MENTION.

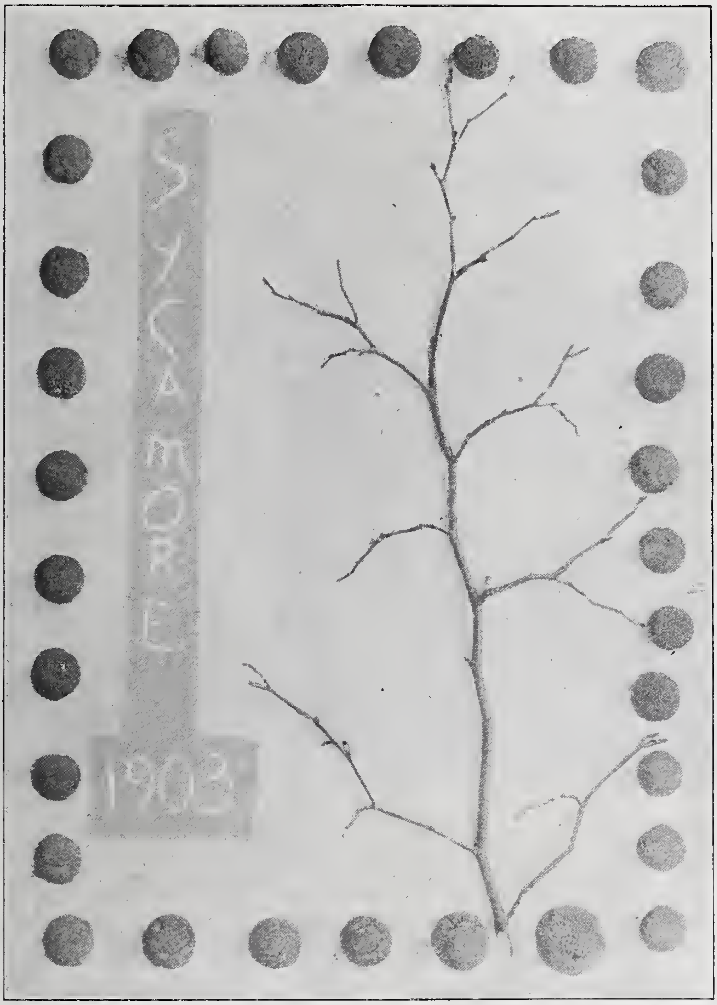
G. W. Whetstone and A. B. C.

CRITICISM OF WINNING PICTURES.

It was simplicity that decided Mr. Gardner's picture to be the first-prize winner. Here is a strip of paper 2½ by 6½, divided into practically three spaces by means of a spray. One long line, characterized by beautiful curves, divides the space into two unequal divisions, the larger of which is again subdivided by a short curved line into two others. Each of these spaces is very agreeable in shape and they differ decidedly in both shape and size. I would draw particular attention to the cleverness with which Mr. Gardner resubdivides his space by means of light and shade into two other divisions, one dark and the other light. With this awanting the print would be very much less satisfactory. The blossoms play a very important part in the print and break up the lines very happily into smaller parts, and even here the importance of variety is appreciated, because it will be noticed that such portions of the line as are visible are of different lengths. From what I have said, it will be plain to my readers that this picture is not the result of accident, but of deliberate reasoning on the part of the maker.

The second-prize picture is evidently a very ambitious effort. Mr. Lyle clearly appreciates the importance of variety. The spray he selected contained but little and so he compensated for its lack by making it on a much larger piece of paper than was necessary, and by means of the title and date, secured what the subject lacked. It seems to me, however, that a little more vigor might have been got in the negative with advantage.

The third-prize picture I know to be the result of very considerable effort on the part of Mr. Alexander. About a year ago he took a fancy to study composition and very seriously tackled the problem by means of flowers as a convenient medium, and all through the winter has given every spare minute of his time to the subject, using principally such plants as he could grow in the house or could buy in the open market. I have seen many of his efforts with sprays and twigs of trees and have been glad to advise him as he progressed with his work. By the print my readers can see that he was working with a purpose. In the first place he breaks up his bare space into two divisions by means of one long line and the smaller



S. D. Lisle, Chicago.

SECOND PRIZE.

of these two spaces is again subdivided, unfortunately rather symmetrically, by means of a little twig. The upper and larger space is broken up by means of a number of smaller twigs with fairly agreeable results.

FUTURE COMPETITIONS.

Competition No. 63 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 64 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.
2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.
3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.
Second—Books to the value of $2.50.
Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

August is a good time to start growing flowers. You will enjoy the articles on the subject, by F. Dundas Todd, in the *Home Bazaar*.

CONCERNING COLOR.

When every technical difficulty in three-color photography has been overcome there will still remain that which, as it seems to us, is perhaps the greatest difficulty, the thing that, more than anything else, retards progress, and that is, to put it quite plainly, the utter ignorance of color which is displayed by the average scientific man. We hope we are hurting no one's feelings. We do not mean that the scientist is worse than the unscientific in this respect, but he needs to be a great deal better.

Another drawback, which has frequently been referred to in connection with the representation of nature in colors, is the variability of human temperament. Only when one begins to think about it and investigate does it become apparent that man's sense of color is as variable as his sense of taste. What seems sweet to one man's palate will need the addition of a big lump of sugar to produce a similar sense of sweetness in another, and color affects different people with equally divergent results. One is struck by the vividness of the green in a landscape scene; another feels most the ruddy glow which runs through all the swelling downs, as unnoticed seed vessels or obscure flowers impart an iridescence to the turfy expanse. A score of instances might be given of how differently a scene or an object will impress different observers as regards the color. One man's temperament yearns for the genial warmth of red and orange, and these appeal to him, and he allows his imagination to dwell thereon, and unconsciously remains indifferent to the blues and grays. For this reason men paint nature in different keys; to one the steely grays and blues appeal most strongly, and involuntarily his picture is in a colder range of color than the work of another, who, through personal sympathy and preference, has emphasized the warmer hues.

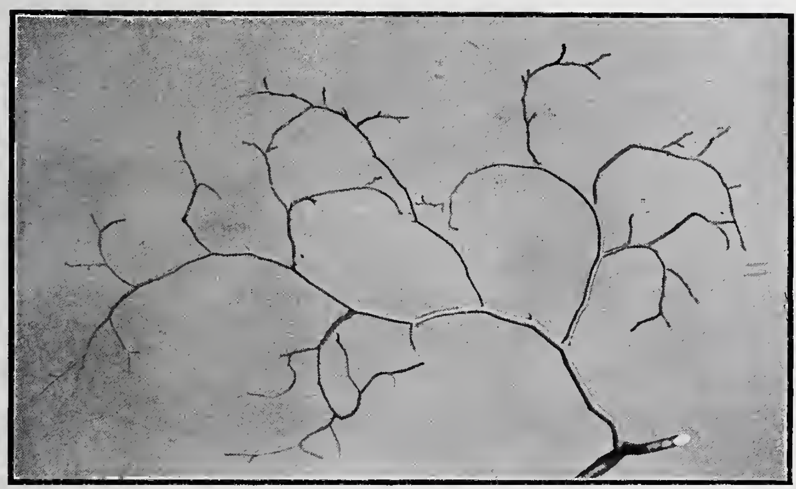
Now, when we speak of the color photographer's ignorance of color, what we mean is that he associates certain colors with certain objects through prejudice and tradition, and has never paused to really observe. Ask most people what is the color of a grass field; they will say green, and the mental impression is probably a vivid green; as "green as grass" is a proverbial expression. But the observer, and, therefore, the artist, knows very well that the color of a grass field is compounded of grays and purples and browns, and a very little green pigment indeed will oftentimes be placed upon the palette wherewith to paint the image of the grass land.

For the most vivid blue sky of an English summer how large a proportion of umber, or ocher, or light red will need to be added to the ultramarine and flake white to produce the gray which we commonly call sky-blue; to the purple and blue and brown, but a very little yellow added suffices to render truthfully all the greenness of summer foliage seen at a little distance. Perhaps the simplest way to sum this up is to say that most people do not distinguish between local color and the color of objects as we see them, subject to the modifying influences of atmosphere, reflection, etc.

It may be contended that given a nature process of rendering color, the rendering will be truthful to fact, in spite of the ignorance and temperament of those who employ it. But think again. Must not this operate in two ways — first in leading the operator to reproduce something as it is not, and secondly, to make him dissatisfied with what is produced, because it is not what his prejudice and preference made him expect?

If a man prepare his own screens, then, in order that he shall get the true trichromatic combination, he must have a greater knowledge, he must have made more exhaustive study of the colors as seen in nature, than is usual, perhaps one might almost say than has ever been attained by any one in the photographic world. If the same man procure his screens and dyes ready prepared, he becomes subject to the vagaries of another man's temperament, if not to the result of his ignorance as well. If the colors in nature were in every case definite standard hues, there would be little difficulty; but they are not.

We print the three images for superposition in greenish-blue, pink and yellow. Who shall say what is "greenish-blue"— how green or how blue shall it be? What is "pink"? A name



George Alexander, Chicago.

THIRD PRIZE.

we apply to an infinite number of shades of red affected by a certain genus of flowers. The same vagueness exists about the third color — yellow.

It would seem, therefore, that in a three-color process the existence of a personal element must rob it of that positiveness which would obtain were the producer and spectator equally well trained in the knowledge of color, and the temperament of both in complete agreement, or better still, entirely absent.

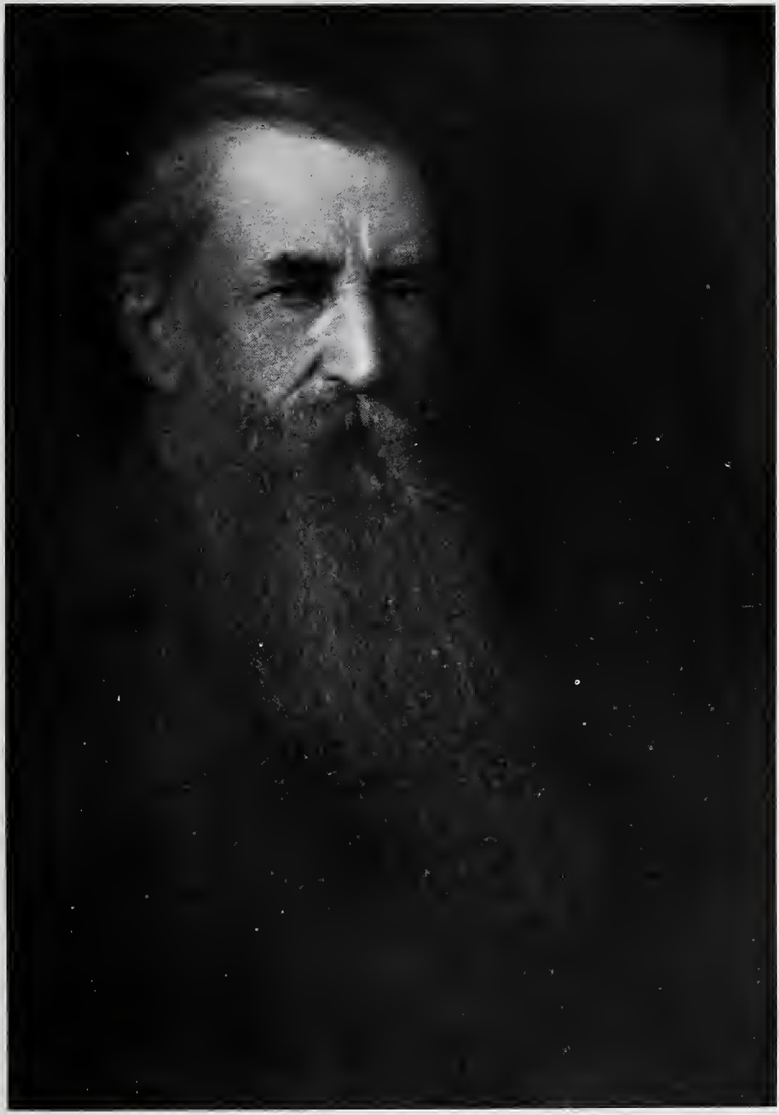
Should what has been referred to in these pages on several previous occasions as the bleaching or fading out process ever become practicable, the personal interference being absent, the results would, if we assume the selection and apportionment of the constituents to be absolutely correct, inevitably be true to nature, and ignorance and temperament would only operate afterward; the former would be surprised, convinced, and with the education it would disappear, while the latter — temperament — would by the guerdon of praise bestowed secure variety.

But does this ignorance of color, to which we have referred, exist? We fear it does. Quite recently, in conversation with one of great scientific knowledge and a careful investigator, we casually referred to shadows in colored objects, a fold in a colored robe, for instance, as being merely a portion of the robe with less color; that is to say, the color of the robe in light, plus a certain amount of black. He had conceived the not unnatural idea that the shadow in a colored object would be that color minus the light, and tending toward black, which would result with the total withdrawal of the light. This is a perfectly scientific conception of color and shadows, but it is not true to fact, because other considerations come in.

We strongly recommend all those interested in color to carefully read the fifth chapter of Mr. Francis Bate's illuminating brochure, entitled "The Naturalistic School of Painting." There will be found in this, and through the whole book, not alone many valuable lessons in tone, color, etc., but an immense amount of suggestion. Before quoting Mr. Francis Bate, however, let the following extract from Mr. John Ruskin be noted and remembered: "It is an absolute fact that shadows are as much colors as lights are; and whoever represents them by merely subdued or darkened tint of the light represents them falsely." With this as an opening paragraph to his chapter on color, Mr. Bate says:

"There is certainly one thing in nature which never dies — that is color. The brightest colors in the brightest sunshine — a shout! — vary, through infinite changes and grades, to the daintiest harmony that this world ever knew, a tuft of reeds long dead betwixt gray water and gray sky — a whisper, that, to lure us in late autumn mists upon the treacherous river.

"Atmosphere and light seem to have entered into a bond with color to play in never-ending tricks — a contract for eternal fun. At one time 'tis a somewhat reddish patch of gray turns out to be, on near inspection, just the brightest bit of scarlet cloth that ever fed a soldier's pride. At another, a piece of rusty iron or chip of broken china lies sparkling in the sunshine like a glorious jewel! And oh! those evenings of the waning year, when the sun, swollen to thrice his usual size, red with a red that nature never matched, lies for a little while, or seems to lie and bleed and soak the sky all round with blood, and stain the river, too, where river waves lap up against the crimson, until, quite lost in all that wealth of liquid red, to which pomegranate seeds would seem quite pale, he sinks below the horizon, so that we watch at last a lingering streak that quickly fades away, and leaves poor painter folk to put aside their miserable tools, to bring their skiff to shore, and hie them home to dream of what they could not reach. Another time, perhaps, it is a happy morning in the early summer, and we go down past garden flowers to where the strawberries grow, and in full sunshine see a stately orange lily stand against the old brick wall. Paint that! a patch of light against a mass of light, both bathed in light, and all the light is color, and all the varied colors are as radiating lights; the wall itself ablaze with every color that we know, and over all, the orange flowers flaming, not one bright tint, but many brighter tints. For when we look, we find that orange hue is a sweet harmony of many different tints, in full transition, from the rosy gray of curving petals which reflect the clear blue sky, through countless shades of pinky orange and of orange pink, to the most lustrous warmth within the flower cup, where each bright color, each and all reflecting, and again reflecting, makes such a glow of colored light, as seems to daze the honey bee there hid, and leaves him giddy for unsteady flight.



McDonald, New York.

" Light and color are indissolubly knit

together, boon companions are they. And atmosphere, as 'twere, a magic wields, of power to change the appearance of the very sun itself. Light helps color in two ways; by heightening its tone, and so making it more powerful to take place in our first impressions of nature, and by actually increasing the number of colors that harmonize to make a tint. A dyer prepares tubs of colored liquids in which he dips his stuffs to tint them as he wishes. We may look into the tubs and see what we describe as green, or blue, or yellow, or any other colored water, as the case may be, but when the stuffs come out from it we see more. They are tinted green, or yellow, or otherwise, according to the liquid in the tubs, but several colors are there to make one tint, for, from every little grain or filament in the texture of the stuff, a shadow is cast, which is, at least, slightly different in color from the color of the light — it must be warmer or colder. Again, between the light and shadow, there is a half-tone, which, in its turn, is slightly different from the other two. Thus light has actually increased the number of colors in the tint. This is the commencement of what is known as "broken color." Although these little specks of different colors are very minute, they certainly exist, and have an enormous influence on the appearance of the object, making it more sparkling and brilliant; and the fitfulness, or rather the trembling of light, causing slight movements and changes of position in these color specks, results in that pulsating appearance so characteristic of bright colors in bright light. To this must be added the influence of reflections from surrounding colors — from the sky, floor, walls or different objects. The color of a shadow cast in outdoor sunlight from a white object onto a white object, and not much influenced by reflections, is pure and bright blue; of course this is in some measure dependent upon the color of the sky, but only in some measure. Notice a heap of chalk lying on the roadside in bright sunlight; the shadow cast from one lump of chalk upon another is pure blue. The light, being sunlight, is very warm; the shadow is cold. Shadow is influenced by reflections, so that if green objects like trees or grass be near, they will probably influence any adjacent shadow by reflecting green into it. If a yellow reflecting object be near, the blue shadows will become warmer. Shadow color is also greatly influenced by the local color of the object which casts it, and the local color of the object it is cast upon. The shadows upon red brick houses are purple — that is the elementary blue shadow, plus the local colors of the object it is cast from, and the object it is cast on, in this case red. The color of a shadow cast upon grass by a red house would be the original blue modified by red from the wall and green from the grass; and that part of the shadow falling upon the grass would be different in color from the shadow on the wall. It would have more green and less red in it. The shadow on the wall would have more red and less green. There would moreover be a slight difference in tone and color, owing to sky, which would influence a parallel plane — the ground — a little, and the plane at right angles to it — the wall — scarcely at all. These are very elementary facts, and it is easy to understand the simple laws which govern shadows in this respect. In their development they become more complicated."—*The Amateur Photographer.*

SPECIAL TRAIN FROM CHICAGO TO INDIANAPOLIS.

Photographers from Chicago and the West, going to the National convention, should join the special train by the Monon route, leaving Dearborn street station August 3 at 12 noon. Fare for the round trip will be $6.67. Full particulars from John F. Decker, 84 Wabash avenue, Chicago.

DEATH OF E. L. WILSON.

Just as we go to press, we regret to learn that Mr. Edward L. Wilson, editor of *Wilson's Photographic Magazine,* died at Vineyard, New Jersey, on Tuesday, June 23, after a long and painful illness.

ON DEVELOPERS.

The photographer, professional or amateur, who thinks that his favorite developer is the only one would be very apt to get a swift shock to his nerves if he were to make a tour through a dry-plate factory. Not long ago it was my fortune to look at a batch of test negatives, part of the daily routine of the testing-room, and among them I found one that was rather thin and I commented on it. The superintendent of the factory, with a quiet twinkle in his eye, remarked: "That plate was not made here," and he went on to explain that it was their daily habit to compare their own plates with that of other makers in the course of the daily tests. Then he concluded by saying: "I wish you would mention what you have seen here and emphasize very strongly the importance to the users of plates always employing the developing formulæ recommended by the manufacturer. The plate that is so thin is a well-known brand very popular and just as fast as any we make, but it requires a little more pyro in the developer than does ours, hence its thinness, and any one who tested that plate with our developer would come to a very erroneous opinion as to its merits. The same thing necessarily holds true when the other makers' formula is used with our plates which are condemned, when the fault lies with the photographer. It is all right in my case to use the one developer for the different plates, because, while I do not get the best results possible with my competitors' goods, I know how they ought to look with our developer, and am thus able to tell whether our own make is up to market standard or not. Please, therefore, oblige us, and incidentally, all other plate manufacturers, by telling your readers as emphatically as you can that they ought to use the formula recommended by the maker of the brand of plate they are using.

F. Dundas Todd.

Snow, Mankato, Minn.

A LENS-TESTING CAMERA.

Regarding this new instrument, the makers, Taylor, Taylor & Hobson, Times building, New York, says: " The camera is not for sale, but we have just made two for use in our London and New York offices to enable visitors to compare the working of different lenses under similar conditions.

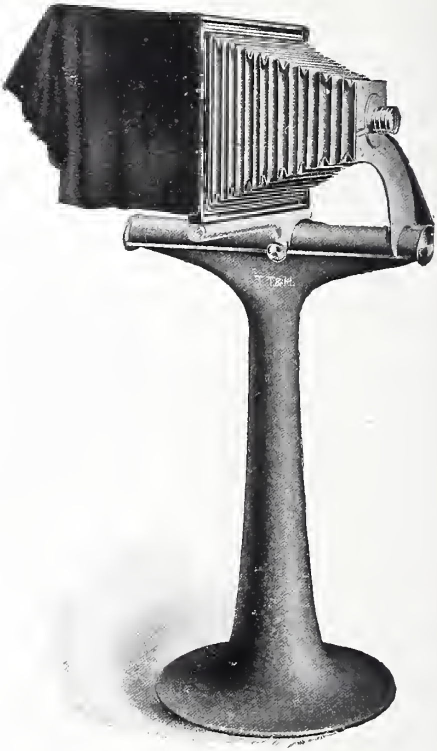
" The average camera of to-day is, you will agree, so weak in design that there is, betwen the front and back, a general want of truth and rigidity which makes it difficult to secure from modern anastigmats, such as Cooke lenses, the utmost sharpness of definition.

" In any test camera it is esential that the axis of the lens be accurately at right angles to the plane of the focusing screen, and it was to ensure this that we were led to design and make this form of camera. Some of its features may perhaps be suggestive to designers of cameras for general purposes.

" The lens holder and focusing screen are carried by a horizontal tubular beam which forms the head of the T-shaped column. As may be seen in the illustration, the axis of this beam and that of the lens and screen are not in the same vertical plane, but the latter is carried to one side so that the weight of the lens and screen tends to rotate them around the axis of the beam.

" This tendency to rotate is utilized to take up all wear or shake in the slides in the following way: Running along the beam are two projecting films or ribs, one at each side of it, that on the near side being visible in the illustration as a longitudinal white line. Upon this rib, as may be seen, one foot of the lens-holder rests, while two other feet, which may be more properly described as claws, reach over to the rear rib and grasp it beneath, acting like the stock of a draughtsman's square to keep the lens always square to the beam. This simple device has the virtue of a three-legged stool in being perfectly stable and free from rocking; it may be placed anywhere along the beam, and stays rigidly without clamping wherever it is placed; while any wear of the feet is taken up automatically without tilting the plane of the flange holder.

" The bearing of the focusing screen on the ribs of the beam has the same arrangement of three feet, which hold it without rocking, and maintain the perfect parallelism of the focal plane with the plane of the lens holder. But to facilitate focusing, the foot which stands upon the front rib, as shown in the illustration, terminates in a roller which is rotated by the milled wheel to move the screen to and fro. Unlike a rack and pinion, this device has no backlash, nor is its freedom or accuracy affected by dust.



" To give the screen ease of motion, its two claws which engage beneath the rear rib are grooved, and the rib is grooved to receive balls which form a ball bearing, and which, in their position beneath the rib, are protected from dust. A lever is provided to lock the slide rigidly after focusing.

" One of these cameras with suitable

test objects is fixed in our New York office, 1135 Broadway, and we should have much pleasure in showing it to any one who may care to see it. Another is to be seen at our London office."

STOPS AND THEIR USES.

Diaphragms or stops are nearly always a source of great trouble to the tyro, and although we have no reason to believe that cameras were used in Shakespeare's day, any student of his plays must think at times that some of his characters were amateur photographers with the usual uncertainty as to the proper use of stops. His Ferdinand of Navarre asserted that "these be the stops that hinder"; his Lysander said that "Theseus knew not the stop"; his Timon of Athens exclaimed: "No care, no stop, so senseless!" His Claudio knew the importance of stops and frankly admitted that he was "governed by stops."

The photographer is "governed by stops," for if he would make good pictures, he should know when to use the different sizes, and to what kind of pictures each size is adapted.

In the first place, diaphragms are used to increase the defining power of a lens over a larger area by the correction of spherical aberration.

Aberration means a straying from the right course. In optics, as applied to photography, it means the inability of a lens to bring to one point or focus all the rays of light which are transmitted through it. When aberration is due to the *form* of a lens having spherical surfaces, it is called spherical aberration. The rays of light transmitted through a convex lens show a distinct image in the center, but dim and hazy at the edges. This is caused by the fact that the lens is not of uniform thickness, and the rays which enter it at the center and those which enter at the margin are collected at different foci. It is all due to the sphericity of the lens surfaces, and so, in converging (positive) lenses we have positive spherical aberration, and in diverging (negative) lenses we have negative spherical aberration. This may be corrected in part by placing a diaphragm close to the lens to cut away or "stop" the marginal rays from being transmitted. This is called increasing the size of the field, as it enlarges the space in which objects can be seen distinctly. The use of a diaphragm necessarily reduces the illumination, so that the correction of spherical aberration is, therefore, generally accomplished, to a large extent, by combining positive and negative lenses having opposite aberrations in right proportion so that the one balances the other.

Holloway, Terre Haute, Ind.

By cutting away the marginal rays, we also secure a greater depth of focus. The depth of focus of a lens is its power to give equally sharp images of objects at varying distances from the camera. A lens working at full opening will rarely render sharp images of both near and distant objects. The use of a diaphragm so reduces the confusion caused by the marginal rays entering the lens, that an apparent depth of focus is secured, but always by sacrificing illumination.

Lastly we come to what is perhaps the most important use of diaphragms, namely, to regulate the amount of light passing through the lens, and thus control the length of exposure required by the plate. A single lens has only one stop which is fastened permanently in front of the lens, but a double lens is fitted with adjustable stops of different sizes, which are placed between the two elements of the doublet. These stops are marked with their focal value and are to be used according to the intensity of the light, the time in which the exposure must be made, the object to be photographed, and the style of the picture to be made.

The effect of the diaphragm opening on exposure is dependent upon two principles, and these once grasped, everything about stops can be readily understood. First, the volume of light passing through a diaphragm is proportionate to the area of the aperture. Second, the areas of circles are proportionate to the squares of their diameters.

Let us illustrate the first principle. Suppose the area of a certain stop in a lens to be two square inches, it will allow twice the amount of light to pass that would be permitted by a diaphragm whose area is only one square inch. It is obvious that the exposure with the smaller stop would need to be twice that with the larger or vice versa. The second principle is as simple as the first. If the diameter of a certain stop in a lens is two inches, and another stop in the same lens has a diameter of one inch, the diameter of one would be twice that of the other. The exposures required would not be in the same ratio, however, as this is a question of diameters, not of areas. Since the volume of light that passes through a diaphragm depends upon the *area* and not the diameter, we must find the ratio of the areas of two circles having the diameters one and two inches. We see at once by the second principle that these numbers squared give us a ratio of four to one. Thus we see that the area of the larger diaphragm is four times that of the smaller, and, therefore, would require only one-fourth the exposure of the smaller.

A few words about the diaphragm systems may not be out of place, for the tyro is frequently becoming confused by the constant use of two systems whose numerical markings are partially the same, but whose actual values are identical in only one instance (F. 16= No. 16.)

There are two methods of marking diaphragms. The first method employs the uniform system numbers, introduced by the Photographic Society of Great Britain, which bear the same ratio to each other as the area of the diaphragms which they designate. The second, by expressing the ratio which the diameter of the opening bears to the focal length of the lens; as F. 8, which means that the diameter of the opening is one-eighth of the focal length.

$$\frac{\text{Focal length } 16}{\text{Diameter } 2} = 8, \text{ usually written F. 8.}$$

The stops marked on the uniform system are numbered from one starting point, which is F. 4, so that the area of each stop is half that of the one bigger and double that of the one smaller, as shown by the numbering. The largest stop is No. 1; the second is half the area of the first, and requiring *double* the exposure is No. 2; the third is one-fourth the area of the first, and requiring *four* times the exposure is No. 4. Continuing on this basis we have the first method of numbering as follows:

Nos. 1, 2, 4, 8, 16, 32, 64, 128, 256.

In the second method the numbers express the proportion between the focal length of the lens and the diameter of the stop. No. 1, I have just said, is one-fourth the focal length and is written F. 4. No. 2 must have such a diameter that its area will be one-half the area of No. 1. The required diameter may be found by squaring 4=16, multiplying by 2=32, and then extracting the square root=5.6. Thus stop No. 2 is written

F. 5.6. Working out the other numbers, we have the following series:

No.	1	2	4	8	16
	f 4	*f* 5.6	*f* 8	*f* 11.3	*f* 16
No.	32	64	128	256	
	f 22.6	*f* 32	*f* 45.2	*f* 64	

With this numbering the comparative exposures of different stops may be readily calculated, for the exposure with any stop is double that of the next larger and one-half that of the next smaller. Both U. S. and F. systems are in constant use and mean exactly the same thing, if used correctly. Reference to the table below will show the relative values of the two systems.

DIAPHRAGMS OR STOPS.

F. SYSTEM.	U. S. SYSTEM NUMBER.
F. 4	1
F. 5.6	2
F. 8	4
F. 11.3	8
F. 16	16
F. 22.6	32
F. 32	64
F. 45.2	128
F. 64	256

As I have said before in this article, the different stops are to be used according to the intensity of the light, the time in which the exposure must be made, the object to be photographed, and the style of picture to be made. The largest stop that will give a clear picture on the edges of the plate is the stop to use for wide landscape views. A very small stop would give a flat picture with little contrast, and the objects would all appear to be on the same plane. The larger stop renders objects as they appear to the eye in respect to distance, proportion and lighting. This quality is called aerial perspective.

If a short view is to be taken, such as the corner of a stone wall with nodding grasses and covered with ivy, or the turn of a little pasture brook, then use a small stop that none of the detail may be lost, for that is the beauty of a photograph where very little distance is represented. One of the best short views I ever saw was that of a little stream over which giant willows were bending, while in the foreground the banks of the brook were made interesting by the detail of nodding grasses and beautiful ferns. This view was made at 3 in the afternoon by an exposure of one-half second with stop 64 on a Stanley plate.

Bowersox, Dayton, Ohio.

The view of a distant town requires different treatment from the ordinary open landscape. A small stop should be used so as to bring all the buildings showing at the edge of the plate into as sharp a focus as those at the center.

A medium stop — stop 8 or 16 — will do well for portraits. The focus should not be too sharp, but rather just enough out of perfect focus to soften the lines of the face. Portraits outdoors should be made with a large stop — stop 4 or 8 — with the lens focused on the figure, not on the landscape, which should appear in masses of light and shade, suggesting rather than picturing the scene. A smaller stop should be used for groups, so as to bring each face into the same focus.

Extra rapid plates and a very short exposure with stop 4 will generally give the best street views.

Interiors require a small stop to secure sharpness. Stops 16, 32 and 64 will be found useful for this class of work. Stops 32 and 64 will seldom be found too small unless the room is very long. When it is desired to include a figure in an interior view, a large stop should be used if the quality of the lens will warrant a short exposure without sacrificing definition.

In marine pictures the light reflected from the water is so intense that a small stop must be used to prevent over-exposure. Stop 16 is very much used for such views, although surf pictures often require stop 32 with 1-100 second exposure.

Stop 128 is of use principally for time exposures outdoors in cloudy weather. The time required will range from 1-5 second to five seconds, according to the light.

Here I must close this already too lengthy article with a word about snow scenes. Experience has shown that slow plates and as long an exposure as possible produce the best winter landscapes. If the light is very brilliant stop 64 or even 128 may be used. The early morning and late afternoon are the best times for photographing snow scenes, as the long shadows are very effective. Stop 32 may be used with good effect on such views. The photographer must use his best judgment to suit the varying conditions of light, but in general the stops as used above will give satisfactory results.

PHIL M. RILEY.

OHIO-MICHIGAN PHOTOGRAPHERS' ASSOCIATION.

Where the Ohio-Michigan Convention will be held

The time for our next annual convention is rapidly approaching and we have every assurance that it will be one of the best. The program is full of good things. The speakers are men who are up in their respective line of work, and who will interest and instruct us. Practical demonstrations under the skylight will be a feature of the convention. If you want to advance in an artistic as well as a business way meet us at Saginaw, Michigan, July 22, 23 and 24.

The amusement part of the program has not been neglected. We will be entertained at a theater party, a trolley ride, a vaudeville entertainment, and will wind up the convention with a banquet at Hotel Vincent. Bring your wives and sweethearts. Something special has been provided for their entertainment.

Special rates have been secured on the certificate plan. Get your certificates when you buy your ticket to Saginaw. Pay full fare going, and by presenting your certificate, you can get one-third fare returning, making the rate one and one-third fare. We are assured of something good in the line of exhibits; something that will repay you doubly for any time or expense. The pictures will all be good, as they will be passed upon by a jury of selection, and it will be a credit to any photographer having pictures there. The secretary will be glad to supply any additional information.

F. W. WOLF, Secy.

SOME FURTHER NOTES ON THE CONVERSION OF THE SILVER IMAGE OF BROMID PRINTS INTO PLATINUM.

BY WINTHROPE SOMERVILLE.

Since giving the above paper at the Royal Photographic Society on December 23, 1902, I have been inundated with correspondence on the subject, principally containing requests for details on the manipulation of the process. I regret that the paper was so vague in this respect as these numerous complaints seem to indicate, and can only apologize with the plea that it was written by special request, at short notice, and, consequently, in a hurry. In the following article I will endeavor to give simple and concise directions for the complete application of the process.

As stated in my paper, the object of the research work was twofold: first, to find a method of obtaining a sepia color by toning; second, to obtain it by a process which would ensure its permanency.

Godfrey, Chicago.

Now, in changing the original black and white color of a bromid print to another, strictly entails a chemical action in the print, and in doing this one wants to ensure the elimination of every chemical compound except that which is necessary to produce the desired result. I wish to emphasize this point in order to impress my readers with the importance of absolute cleanliness, and the freedom from any further chemical reaction when once the tone is produced. Therefore, when once the bromid print is developed and fixed, it must be thoroughly washed.

The print may be toned straight away, or allowed to dry first; I would advise the latter proceeding, as it is so much easier to judge the ultimate depth of a print.

Before toning, the print must be soaked for at least fifteen minutes in clean water. The best method of preparing the toner is to mix it up from concentrated standard solutions of the salts.

If potassium chloroplatinite is used, the well-known fifteen-grain tube should be broken, and the contents dissolved in 7½ drams of *distilled* water to which one drop of concentrated hydrochloric acid has been added. It should be kept in the dark. If the solution be made any weaker there is a liability of the platinum precipitating out. With the above thirty minims is equal to one grain of potassium chloroplatinite and one-half grain of pure platinum.

If platinum perchlorid be used, its strength in platinum should be known.

The mercuric chlorid is dissolved in distilled water and made up to a convenient strength, say one grain to the dram, and it is advisable to add a drop of hydrochloric per ounce of solution.

The citric acid must not be made too concentrated, otherwise a kind of fungus growth occurs in the solution if kept too long. A convenient strength is thirty-six grains per ounce in distilled water; in this case two drams will equal nine grains. The speed of the toner is governed by two factors, the concentration of solution, and the amount of silver in the image to be replaced.

Thus, a print containing a large amount of deep shadow will require correspondingly more platinum; this is an important point to be remembered.

The formula given below contains the minimum quantity of platinum I have found to work efficiently in combination with the other salts, and, roughly speaking, is sufficient to tone one hundred square inches of area containing an average amount of silver deposit. But the quantity of platinum that may be used with the quantities of the other salts given is unlimited, except as regards staining when bromid is omitted.

The formula is as follows:

Potassium chloroplatinite....	2 grains

or

Platinum	1 grain
Mercuric chlorid..........	1 grain
Citric acid................	9 grains
Water	1 ounce

This solution will tone three or four half-plate prints easily in twenty minutes, and it is advisable to tone them singly, as it does not work quite so well if several prints are placed in the dish at the same time. With the fresh solution the first print will tone in five minutes. More platinum may be added from time to time, but the total amount should not exceed six grains with the quantity of the mercury and citric acid given. If a large number of prints are to be toned it is far better to make up a greater volume of solution, thus:

Say, twenty-four half-plate prints, then the formula would be:

Platinum	6 grains
Mercuric chlorid..........	6 grains
Citric acid................	54 grains
Water	6 ounces

In this solution three prints may be toned at the same time.

I would remind my readers that in giving the relative quantity of platinum to the other salts I mean the metal itself, not the compound salt, and do so advisedly, since the perchlorid as well as the chloroplatinite may be used.* It is better to rock the dish, although it may be allowed to stand if desired, but with the above solution staining will inevitably occur.

Without the addition of bromid of potassium the intensification is only slight, but the scale of gradation will remain the same all through, except of course that the shadow end will be raised from black to sepia.

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* Platinum "perchloride" is $H_2PtCl_6.6H_2O$, and contains about 40 per cent weight of platinum.—EDS.

Intensification, with a colder sepia and a complete absence of staining, may be produced in varying degrees of intensity by the addition of from one to four minims, or practically drops, of ten per cent bromid of potassium solution to the original or minimum formula.

If this quantity be exceeded there is a risk of a bleaching action.

Now, the solution containing the bromid slightly increases the speed of toning, and if the full amount be added in the first instance, the intensifying action is practically instantaneous, with the initial production of a fine blue-black tone; but if it is desired to preserve this color, the process must be carefully watched, and the print quickly removed and washed, as the change to the sepia color follows very rapidly. Some control may be obtained by dilution. Since the greater part of bromid printing consists of enlarging, some may be inclined to think that the platinum process an expensive one; and, compared to the hypo and alum, uranium, sulphantimoniate, etc., it certainly is; but in comparison with gold toning there is little or no difference. In my own practice I rarely work anything less than 24 by 18, and I soon found that a fifteen-grain tube of chloroplatinite vanished with inconceivable rapidity if prints were toned in a dish. I therefore resorted to brush toning.

Hollinger, New York.

Now, there is a right and a wrong way of doing this, and in telling you what not to do, I wish to be absolved from any implication that nobody can work the process better than myself — far from it; I simply wish to say that, of all the various methods tried, the one about to be described I have found to be the most economical and efficient, both as regards the resulting print and one's state of mind at the work's end.

Do not stint the quantity of platinum; false economy will spoil your print and your temper. A tube of potassium chloroplatinite costs 1s. 8d., and you may have to use half of it for a 15 by 12 print; consider beforehand whether the print is worth it, especially as the solution will not keep more than two days after use. Do not use an old solution for a new print in preference to making up a fresh one.

Do not forget that the color of a wet print is more intense than a dry one. A print may be partially toned, washed slightly, allowed to dry, and toning continued at another time. Do not use a sponge or cotton wool; use a broad camel's-hair brush.

Where possible, the print should be placed in a dish standing at an angle of about sixty degrees, so that the solution collects at the bottom; the brush is dipped in this and lightly passed over the top of the print, again dipped and passed over nearly one brush width lower till the whole surface has been treated. Turn the dish upside down at intervals of about five minutes.

Where a dish is not available, the soaked print may be laid on a sheet of glass or clean drawing-board, with one corner standing in a small dish. The bottom of the print must overlap on to a piece of stout drawing-paper or other suitable material, curled up in such a manner that it will convey the solution to the dish.

Do not brush a print in a flat position.

The color of a print may be slightly lightened by increasing the quantity of mercury by about five per cent.

With gaslight papers, such as those made by the Imperial Company, a very exquisite tone is obtained, but it does not work satisfactorily with Velox.

If a print is too light after toning, it may be intensified to a black color and retoned by either of the following methods:

1. Direct immersion in ten per cent hypo, in which a compound of mercury and sulphur is formed; the print must be freed from hypo before retoning. 2. Immerse in cupric bromid bleaching solution for two or three minutes — copper sulphate, 200 gr.; potassium bromid, 200 gr.; water, 20 oz.

Little or no bleaching will be visible, but the print must be washed for two minutes in running water and a developer used for bromid work applied.

The application of an ordinary bromid paper developer.

This latter is the simplest method, although the intensification is not quite so powerful. Personally I dislike any image consisting of a compound of mercury and sulphur, owing to its impermanence, and, therefore, do not strongly advise No. 1 method. If it is wished for the image to consist of pure platinum, it should be immersed in the copper solution for five minutes, washed for five minutes, and then treated with an ordinary hypo solution, when the color will be very much lighter. A great feature in the process is the hardening action on the film, engendering the complete absence of blisters, even when the solution is heated up to 90°F.

As an intensifier for negatives it is extremely simple and efficient.

To the minimum solution add four minims of ten per cent bromid, apply to a negative which has been previously soaked for fifteen minutes. The limit of intensification should be reached in five minutes at the outside, but the negative should be examined from time to time to prevent the toning action which follows, and which would commence to reduce the steepness of the scale of gradation by raising the *high lights* from black to sepia. This fact, on the other hand, may be turned to great account in reducing the contrast in a negative by employing the solution without the bromid.

After treatment, the negative is washed for five minutes.

If intensification is insufficient, it may be increased by any of the methods given for bromid paper.

In conclusion, I have only to add that the change of color produced by the solution, either as a toner or intensifier, is strictly limited to that of a sepia, light or dark, according to the original depth of tone in the black.—*The Photogram.*

INTENSIFICATION WITH MERCURY AND FERROUS OXALATE.

BY CHAPMAN JONES, F.I.C., F.C.S.

Whenever the mercury and ferrous oxalate method of intensification is referred to in this or any other paper, there generally follow a few queries as to the best formula. The answers to these queries, so far as I have seen them, give methods that will work and to that extent are satisfactory, but they never give what my investigations, published from ten to fifteen years ago, and my subsequent experience, have found to work the most satisfactorily. I propose, therefore, to give the formula that I recommend, and for the information of those who care to go further into the matter, to follow this with the reasons for its adoption, and the effects of variations therefrom.

Rosch, White Plains, N. Y.

It may be worth while just to briefly point out the advantages of the process, and why it stands alone. It is the only method that has been proved to give permanent results, while the greater number, if not all, of the other generally known methods have been shown to give negatives that can not be depended upon to remain without change. It is the only method that has been shown to give strictly proportional results, that is, to produce always the same effect, an effect, therefore, that can be certainly foretold. The other usual methods give different effects according to the variations in their application, time, dilution, and so on, and do not produce an equally proportional effect in the various parts of even the same negative. The delightful certainty of the process, as soon as the photographer once gets into the way of applying it, that is, if the photographer cares for photography, generally leads to its adoption as the standard method.

Three solutions are required:

I. MERCURIC CHLORID.

A saturated solution.

Add strong hydrochloric acid, half a

dram to each pint; or three drops to two ounces; or three c.c. to each litre.

This solution must be prepared in quantity sufficient to well cover the largest plate to be treated, and may be made by simply putting the powdered mercuric chlorid (corrosive sublimate) into the water and shaking it up a few times. What does not dissolve may be left at the bottom of the bottle, and will be gradually taken up as the solution is used. The solution after use may be returned to the bottle and will last indefinitely.

2. POTASSIUM OXALATE.

A saturated solution.

This solution also will keep as prepared indefinitely, but can not be preserved after use, except perhaps for immediate use a second time as stated below. Those who have not the conveniences of a laboratory may conveniently prepare this solution by tying up about half a pound of the salt in a piece of muslin, tying this to a stick of wood, so that by putting the stick across the mouth of a jug the substance is suspended at the top of the water that it contains. About a quart of water may be taken. If after a few hours the salt has all dissolved, a little more must be similarly treated, that the solution may be saturated.

3. FERROUS SULPHATE.

A saturated solution.

This solution will not keep in good condition for more than a day or two. Probably the most convenient way to make the half-ounce or so needed is to grind up a little of the salt with rather less than the required amount of water, seeing that a little of the ferrous sulphate remains undissolved.

The method is to soak the plate in the mercury solution until very nearly bleached through, then to wash well. The mercury solution held in the film will complete the bleaching during the first minute or two of the washing. If the bleaching is quite complete before the mercury solution is poured off an unnecessarily large amount of the mercury salt enters the film, and the washing takes a longer time. After perhaps an hour's washing, measure just sufficient of the potassium oxalate solution to cover the plate and add to it one-sixth by measure of the ferrous sulphate solution, and apply to the plate. When the image is thoroughly blackened, as shown by looking at the back of the plate, wash as usual.

If hard water has been used it is well to gently rub the surface of the film while it is *under water* with a pad of cotton wool held so that the nails can not scratch the film. This will detach the most of the calcium oxalate deposited from the hard water. If the plate after drying shows any deposit on its surface it may be safely neglected, as it will disappear when it is varnished. With soft water this production of oxalate of lime does not occur. With London water it is hardly worth calling a trouble. If it should prove an annoyance, the lime may be removed from a gallon of water by adding to it a solution of a few grains of potassium oxalate, and allowing the deposit to settle. The purified water may be used for the two washings that immediately precede and follow the application of the ferrous oxalate. The amount of potassium oxalate required may be from twenty to thirty grains or more, according to the hardness of the water.

The mercuric chlorid solution should have nothing added to it except the acid mentioned. Ammonium chlorid is unnecessary and not advisable. In the absence of mercuric chlorid it has a specific effect upon the bleached image which is quite different from that of ferrous oxalate, and it is quite unnecessary to run this risk.

No acid should be added to either the potassium oxalate solution or the ferrous sulphate solution; it is not required, and its effect is to slow the action of the ferrous oxalate. The ferrous oxalate should be prepared as stated, and not diluted with water. Nor should any of the potassium oxalate solution be replaced by water, as that would slow the action and might render the precipitation of the yellow deposit of ferrous oxalate dangerously possible. The proportion of one to six, as recommended, gives a large excess of potassium oxalate, which ensures a clean action, and allows plenty of margin for errors of measurement. If the ferrous sulphate taken were increased by fifty per cent the mixture would probably work satisfactorily, but as the amount of ferrous sulphate solution to be measured is generally small, it is well to have a large margin of safety. The addition of a bromid to the ferrous oxalate solution slows the action and offers no compensating advantage. The action of the ferrous oxalate in intensification is not comparable in this matter to its action in the development of an exposed plate. We want it to work quickly and thoroughly, there is no discrimination to be effected as between exposed and non-exposed silver bromid, in intensification the whole of the metallic salts present have to be reduced to the metallic state, and the more quickly this is done the better. The ferrous oxalate can not possibly do too much, therefore all retarders are disadvantageous.

Hollinger, New York.

The ferrous oxalate solution may be used at once for as many negatives as it will serve for; but if only the necessary quantity is mixed, though it may suffice for a second plate, it is generally so slow in action on a third plate that it is preferable not to rely upon it.—*The Amateur Photographer.*

INDIANA ASSOCIATION OF PHOTOGRAPHERS.

FORT WAYNE, IND., May 23, 1903.

To the Members of the Indiana Association of Photographers:

At the last Indiana convention, Winona Lake was selected as the place for holding the 1903 convention, but as the National Association voted to meet in Indiana this year, a new situation had to be considered.

Can we hold a successful State convention and also do our duty toward the National Association? Can a majority of our members afford to attend two conventions this year, and, if not, will it not be to the interest of our members to dispense with the State meeting and attend the National?

After carefully considering these questions, the Executive Board has decided that it will be best not to hold a State convention and now ask the members to do all in their power to make the National Convention the largest and grandest ever held.

Indiana's exhibit will be hung separate as a State, and it is our fondest hope that every member will be represented with the best work they are capable of making. Do not wait, if you have not begun on your exhibit, do so at once; do not put it off until the last week, decide now to be represented and put your whole heart into the work.

The Indiana orchestra has kindly tendered its services for the convention, and this feature we know will be greatly appreciated by all in attendance. Show your appreciation of their sacrifice by doing your best to make the members of the National Association feel that Indiana is the most loyal State to which they can bring their meetings.

On Wednesday, August 15, the Indiana Asociation will hold a meeting and questions of the most vital character will be discussed at this meeting. It is important that every member be present; do not fail to be on hand. The exact time and place of this meeting will be announced at the meeting of the National Association on the day previous.

Indiana photographers, who are not members of the State organization, we invite and urge to join with us in extending to the photographers visiting our State the glad hand of fellowship. Come, help us in giving them a royal reception.

Fraternally yours,
GEO. J. PARROTT,
Pres. I. A. of P.

THE NATIONAL CONVENTION.

The secretary of the National Association, Mr. George G. Holloway, Terre Haute, Indiana, requests us to remind readers who propose visiting the National Convention that they can secure round-trip tickets on the certificate plan for rate and one-third, and suggests that those intending to visit the convention should interview the ticket agent in their respective towns a few days before starting in order to make certain that he will have the certificates on hand.

THE INDIANAPOLIS CONVENTION OF THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

The many entries to the Art Exhibit for the coming convention of the Photographers' Association of America, to be held at the German House, August 4 to 7, indicate the success of the Indianapolis convention and show that the photographers are alive to the benefits that are derived from these meetings.

It is being recognized that photographic conventions have educated the public as well as the craftsmen, and every wide-awake man seems proud to assist in the work. This fact has been emphasized to my mind by the many very enthusiastic letters from all quarters. The public takes more and more interest with us each year, and have come to look upon the various associations as benefactors, and consider the members as being up with the times. It is not, however, necessary to dwell on these points, as they have been fully discussed, both in print and in the minds of the individual.

The prospects are certainly very bright for the largest convention yet, and for the benefit of the many who wish to attend, the information regarding hotels and railroad rates is due, and you will please print the following:

RAILROAD RATES.

A railroad rate of one and one-third fare on the certificate plan has been secured, and by getting a certificate of the agent when you purchase your ticket to Indianapolis, you will be furnished a ticket at one-third fare home.

HOTELS.

No city is better supplied with good hotels than is Indianapolis, and the prices are reasonable, which are as follows:

	Per day and up.
Claypool Hotel, American (headqrtrs.)	$3.00
Hotel English, American	2.50
The Grand, American	2.50
Spencer House, American	2.50
Circle Park Hotel	1.50
Stubbins	1.00
Occidental	2.00
The Denison, European	1.50
Loraine Hotel, European	.75
The Oneida Hotel, European	.50
Hotel Morton, European	.50

To reach the convention hall, take Central avenue, Brightwood or East Tenth street cars, which will take you out Massachusetts avenue and land you at the German House, where you will be taken care of by the best convention yet.

The hall is a beautiful one and just suited for making you feel at home. For those who wish, luncheon will be served in the building and save you the time necessary to go to the hotels. Every care will be taken to make affairs pleasant.

Remember it is your duty to send an exhibit and help by your efforts to raise the standard of photography still higher. You may not at once see the benefit, but if you will take note of the great improvement in photography in the last few years, you will then realize the help you are lending.

Respectfully,
C. R. Reeves,
First Vice-president.

The Photo-Beacon Exposure Tables are guaranteed correct. Price, 25 cents.

RODINAL.

Rodinal is such an excellent preparation that I can not praise it too highly. Although having experimented with many developers, I was always a stanch believer in ferrous oxalate for plates and Stolze's bromid papers. I was loth to change until, out of curiosity, I sent for a half-liter bottle of rodinal, and it was but a short time when I became aware of its great advantages.

As long as there is chemical action and reaction it is obviously essential to banish the use of hard water in connection with developers, otherwise it is compulsory to frequently replenish with fresh water.

Spellman, Detroit.

This is different with rodinal.

As rodinal contains only traces of carbonic alkalies, distilled water is not essential for the dilution. Boiled or rain water is preferable when convenient, but ordinary tap or well water answers quite satisfactorily. The simplicity of this developer is remarkable; all that is necessary is the addition of from

20 to 50 ounces of water to 1 ounce of rodinal. The exact amount of water depending upon the season and the purpose. When required, a small amount of bromid (ten per cent solution) may be added.

If used in developing plates and films, this developer can be renewed by the addition of about ten per cent of a solution of sodium sulphite. Label a bottle "stock solution," fill it to the neck and close with a rubber stopper.

Irrespective of the fact that it is very economical to work with rodinal, it certainly makes itself very acceptable, eliminating as it does to a great extent, all the objectionable features of weighing, measuring and mixing, at the same time obtaining as good, if not better, results. I have therefore definitely discarded the use of other developers.

Last summer I developed in the above proportions three hundred plates, with beautiful results, also fifty large (30 by 40 centimeter) Stolze's bromid papers, obtaining exquisite black-gray, black and black-blue tones. Hence, after this experience, I must advise every one to use this wonderful offspring of paramidophenol — "rodinal."

PROF. J. KRAMERING,
Czernowicz, Austria.

AN INTERNATIONAL PHOTOGRAPHIC COMPETITION.

The photographic competition inaugurated by the Bausch & Lomb Optical Co., Rochester, New York, which closes October 3, next, has assumed international proportions, as exhibits have already been received from nearly every quarter of the globe, including China, Japan, Australia, South Africa, South American countries, etc. The collection of pictures when the exhibits are completed next fall will embrace every branch of photography, from the simplest of amateur to the most advanced of professional work. The great number of photographs submitted and their wide distribution is not to be wondered at, since the Bausch & Lomb Optical Co. has produced over half a million high-grade lenses, besides many hundreds of thousands of the simpler forms of photographic objectives which are used on hand and box cameras throughout the world, as well as photographic shutters for every camera-making country in existence.

Awards are given in each class also for lenses of other manufacture fitted with Bausch & Lomb shutters. All the Bausch & Lomb lenses, no matter on what cameras supplied, have the Bausch & Lomb name engraved upon them. The same is true of the shutters.

American photographers will take good care that none of their laurels are carried abroad, and it has become quite as much a matter of patriotism in submitting fine exhibits as a matter of winning the large cash prizes offered.

THIS IS THE LAST CALL.

All aboard for the National Convention, August 4, 5, 6 and 7.

The fellow that stays at home this year will regret it only once, and that will be forever.

Because — A fine railroad rate has been secured, making it easy for all to be on hand.

Because — This is without doubt going to be the grandest and best convention in the history of the Photographers' Association of America.

Because — Everything has been done to have a rousing meeting, and the entertainment features have been well looked after.

Because — The H. Lieber Company will start the ball rolling with a grand reception concert on the opening night which will be one of the best things attempted up to now. Be there on the first night to get the full benefit of the proceedings.

Because — Many hotels have given us very reasonable rates, and you will surely find something within your means. Headquarters have been established at the New Claypool Hotel (one of the finest in this country), where we would like to see as many stop as possible.

Because — It is up to you to help to keep the pace.

So fall in line.

GEO. G. HOLLOWAY,
Secretary P. A. of A.

OHIO - MICHIGAN CONVENTION.

The Ohio-Michigan photographers' convention will be held this year in the Masonic Temple, at Saginaw, July 22, 23 and 24. The program prepared by the committee assures a pleasant and profitable time. Every photographer eligible to membership should not let this opportunity pass to become a member as well as to send a display of pictures, which will be judged by a committee of three artists and three photographers, thus selecting only the best of every exhibitor's work. These will then be criticised during the meetings, and it behooves every photographer to be present to hear the criticisms on the work. This feature is an innovation, and we urge all photographers within five hundred miles of Saginaw to be present and enjoy the good things prepared for us.

You can not afford to miss the art lecture by Otto Walter Beck, of New York, and the lecture on "Business and How to Bring It," by W. I. Scandlin, and an illustrated lecture on "Pictorial Composition," by F. Dundas Todd. This will be followed by the banquet, given by the Saginaw photographers at the Hotel Vincent. For a good profitable time, meet us at Saginaw.

Fraternally yours,
A. L. Bowersox, *President,*
Dayton, Ohio.

Koehne, Chicago.

ACID VS. ALKALI.

BY CHAPMAN JONES, F.I.C., F.C.S.

The difference between a system founded on principle and one founded on empiricism is a matter of degree only; the first has a larger foundation than the other. A principle is the essence of much and varied experience.

To the superficial observer it will often appear wrong, just as the surgeon and dentist are regarded by the child as paingivers and unmitigated annoyances. But the principle will vindicate itself, and those who have fought against it or neglected it will be the losers.

Photographers too often follow a shallow empiricism. A process gives a result that appears for the moment to be satisfactory, or it saves a little time without any immediate obvious disadvantage, and it is forthwith adopted and recommended. One example of this that I wish to refer to is the use of acid clearing and fixing baths.

When gelatin plates were first introduced they were generally developed with pyrogallic acid and ammonia, a mixture that speedily becomes very dark colored and produces its natural effect upon the film. It was noticed that acids lightened the color, or, if not too dark, practically bleached it, and so acid clearing baths of all sorts gradually came into use. Eventually we had acid fixing baths introduced for much the same purpose, and so the acid treatment was made complete and became very popular, without any inquiry, so far as I am aware, into the real effects resulting.

It may be said that whatever fault may be found with the acid treatment, it has proved to be convenient in practice, and not detrimental. I believe that an alkaline treatment, as given below, will be found quite as convenient, that is, not more tedious, besides being sound from a chemical point of view. And as to the acid treatment not being detrimental, that again is a purely superficial view of the case. No one knows how many negatives have been spoiled by it, for negatives are not often critically examined after they have furnished the prints immediately wanted. If, at a subsequent date, they are found faulty, the printing-paper is generally blamed, and it is possible now to get papers suitable for almost any kind of negative. And a change that merely deteriorates an ordinary negative may quite ruin a negative made for a scientific purpose.

Excluding collodion films and ferrous oxalate developed plates, both of which are practically obsolete except for certain purely technical purposes, it may be taken as axiomatic that after development no acid bath should be used until the alkali is washed away. It is not well to introduce an acid into the film while the sodium carbonate is there, because for one reason, the disengagement of carbonic acid is liable to loosen the film from the glass. There are other chemical changes that may take place, and it is desirable to keep the possibilities of change as few and as simple as possible. Now, the washing after development is a positive source of danger. Every developer used at the present time contains a sulphite to keep the solution colorless, and during the washing this becomes more and more diluted, and so less able to do its duty. The developing agent also is diluted, but its power to color the solution is reduced very slowly. If a solution of pyrogallic acid and sulphite is diluted to various degrees and exposed to the air, it will be found that the more dilute it is the more readily it becomes colored; and other developers behave in a similar manner. This washing, therefore, that used to be considered the photographer's sheet anchor, is itself a direct source of danger; it introduces the very evil that the acid bath is used to get rid of.

And the acid bath itself is a great source of danger. Any one can prove for himself what I have several times pointed out, that the coloring matter, or staining matter of oxidized developers, is rendered less soluble by the addition of an acid to it; in fact, it is precipitated from the solution. Its color is lightened, and so it has generally been taken for granted that it has been removed when operating upon a negative, but instead of being removed it is fixed, and remaining in the film, is always liable to regain more or less of its original color.

By the alkaline treatment, the washing and the acid are both avoided; the oxidized developer, if any is present, is kept in a soluble form, and, therefore, in a form that will allow of its being washed away; and as it is in its most visible form, it can easily be seen when it has been removed.

A developer ought to be so compounded and used that it leaves the film clean, and in the fixing operation it remains to keep it clean. Clearing baths ought never to be needed. But, if by accident a negative should need clearing, the same kind of treatment that is the best for keeping it clean will be the best for making it clean.

After development the plate should not be washed, but merely rinsed to remove the solution clinging to its surface, and then at once put into a fixing bath compounded in a similar way to the developer, but with hypo instead of the developing agent. It is not necessary to have the alkali and sulphite present in so large a quantity as in the developer. I have found a quarter to a fifth the strength serve well, but the exact quantity is not of great importance. A good fixing bath for general purposes will contain in each pint: hypo, 4 oz.; sodium carbonate, 20 to 30 gr., and sodium sulphite, ¼ oz. This solution keeps indefinitely. After remaining in such a bath until it appears fixed, the plate should be soaked further in a fresh portion of the solution, and then thoroughly washed once for all. By this kind of treatment the gelatin is kept clear, but if it should have become stained, the fixing bath tends to dissolve the matter that forms the stain and so to remove it. Such a bath does not deceive, for the staining matter remains of its full visible color so long as it is present. When the film appears to be clean, it really is clean so far as can be ascertained, for the stain, if any, is in its most visible form.

Such a fixing bath as that recommended may be used again and again until its action is slow, if that is desired; and I do not see that more can be said of the acid bath. The solution may get a little dark, but I have never known it to stain a film. When deemed advisable a small portion in active use is thrown away, the second portion takes its place, and a fresh quantity from the stock bottle is taken to form the second bath. Besides the advantages already described, such a bath retains the full fixing power of the hypo put into it, and there are no changes to take place between its constituents. In these matters, too, it is distinctly superior to any acid bath. In short, the alkaline bath has all the advantages of the acid bath and none of its disadvantages; it is the only true method of keeping gelatin films clean, and alkaline treatment is, I believe, the only way of making them clean.— *The Amateur Photographer.*

Gunderson, Winona, Minn.

EDITORIAL TABLE.

From Tennant & Ward, No. 287 Fourth avenue, New York, we have received copy of a book entitled, "Photographic Lenses," a simple treatise by Conrad Beck and Herbert Andrews. It consists of 288 pages, profusely illustrated with half-tones and many diagrams in the text. This book is especially interesting because it is written and illustrated by two well-known makers of lenses. We have read every word of it from cover to cover and enjoyed the lucid explanation to be found on every page, and can highly recommend it as being a book that should be in the hands of every user of lenses. The price, 75 cents, is more than reasonable.

"Montauk Cameras" is the title of the 1903 catalogue issued by G. Gennert, 24 East Thirteenth street, New York, and, as the title indicates, its aim is to explain fully all the good features of this line of cameras, and there are many. It will be forwarded to any one interested on request.

Lloyd's Photographic Encyclopedia for 1903 is now ready, and as usual is crammed full with valuable practical information in its 416 large pages. It will be sent on receipt of 20 cents, the actual cost of mailing, by the publishers, Andrew J. Lloyd & Co., Washington street, Boston, Massachusetts, and is cheap at the price.

From Burke & James, No. 118 West Jackson boulevard, Chicago, we are in receipt of their catalogue for 1903 which deals with all the specialties, not only manufactured by themselves but with practically all those on the American market. In new features we notice a very clever little device in the Ingento postal-card outfit, which is designed to cater to the recent fad that had its inception at the eastern summer resorts about two years ago. This little outfit consists of an enlarging lantern with condensers, extra long bellows and all conveniences for making enlargements of any desired size from a negative in the very shortest possible time. Another novelty that will draw attention in other than the photographic field is the Ideal Balance Scale, which, at the low price of $3, ought to command a big sale, seeing that it is guaranteed perfectly accurate from half a grain up to about four ounces. We lately had the pleasure of testing it and found that the addition of a little fragment of paper was enough to turn the scales. Altogether this is one of the neatest bits of workmanship in this line that we have come across, and we believe it will find its way into the hands of druggists, jewelers and such, as well as into those of photographers.

One of the latest additions made by the Century Camera Company, Rochester, New York, to their line of photographic apparatus is the curtain slide shutter, which is perhaps better known to most by the name of Focal Plane Shutter. This form of shutter has been immensely popular in Europe for over a dozen years, and now promises to be as much used in this country. It has two great points to recommend it, one being the great range of speeds possible with it, and the other its high efficiency, which admits of at least double the light reaching the plate that is possible with the same exposure when any other shutter is used. The cut illustrates the style of the instrument very clearly.

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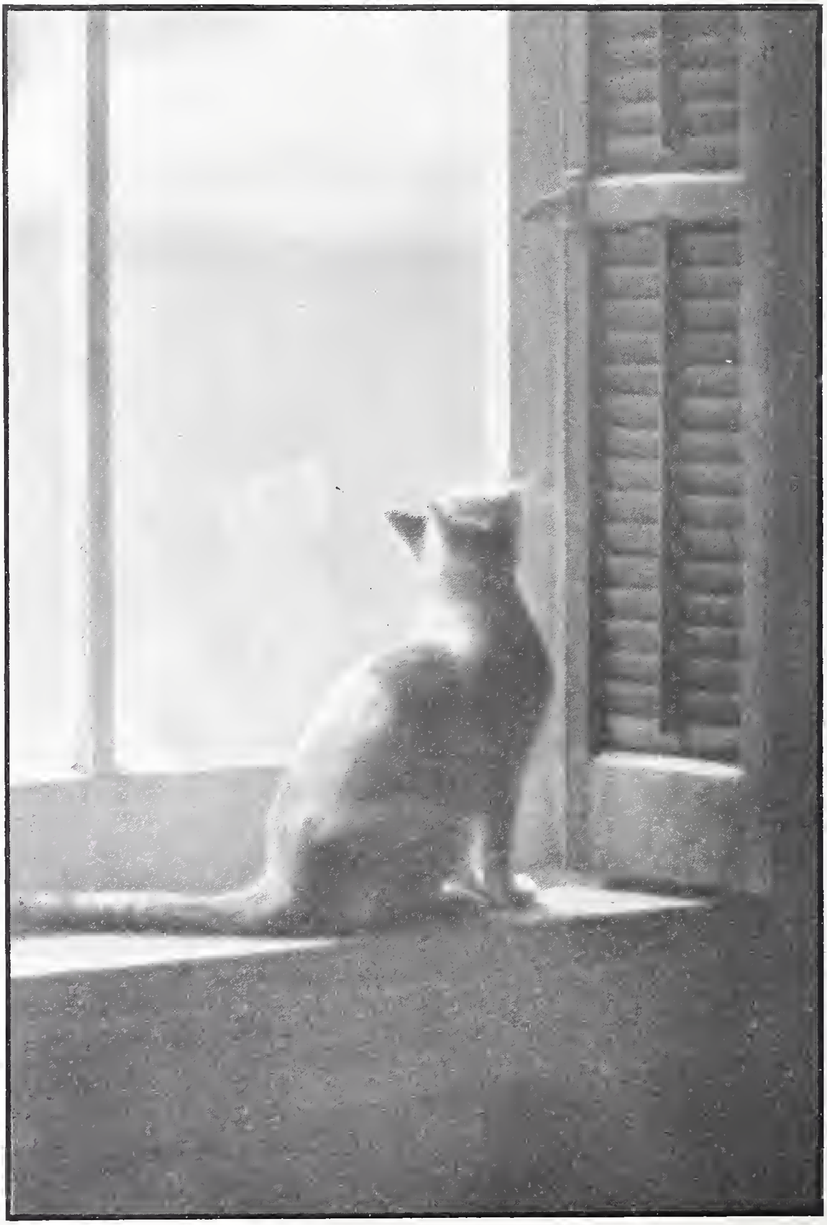

J. H. Field. FIRST PRIZE. Berlin, Wis.

THE
PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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PHOTOGRAPHIC BUSINESS.

All photographers realize that their occupation naturally divides itself into two parts, the technical and the business departments, and it is well known to everybody that while many men excel in one branch or another, the combination of both is unfortunately rather rare. It is a well-known fact that photographers may be readily classified under four headings: those who are excellent photographers but naturally poor business men; those who are neither good photographers nor good business men; those who are good business men but poor photographers, and those who are both good business men and good photographers. The first generally make a moderate living; the second prove to be failures; the third are apt to make money, the fourth are the most successful men in the profession, but the number of them in this country does not exceed the century mark.

Mr. Strauss, of St. Louis, is one who happens to be both a good business man and a good photographer, and each time that I go into his studio I discuss with him many points about his business. I find him always very willing to tell all he knows. There are no secret processes or tricks in his business, and he is perfectly willing that the humblest photographer in the land should be posted upon his methods, because, as he says, the ideas that govern his business conduct to-day will, in all probability, be superseded by something else at a very early date.

I happened to be in Mr. Strauss' studio early in the month of May, and at once began to look around for new features, and I found a new addition in the shape of a very large handsome album that reposed on a very substantial but plain stand in one corner of his reception-room. I at once began turning over the leaves and found that it contained about a couple of hundred 8 by 10 platinum prints of members of the male sex, evidently of various ages. Below each was written the individual's name and the highly significant sign of two dates, which I interpreted to mean that those whose protraits were found therein had departed this life. I at once inquired the wherefore of this idea and was told that it was an outgrowth of another one that had held good for many years.

Around the walls of the reception-room are to be found, in panels, about eight hundred portraits of gentlemen, all of the same size, namely, 8 by 10 prints. This idea was started when Mr. Strauss opened up this new studio some half a dozen years ago and went by the title of the "St. Louis 400," and in the collection were to be found the men who had attained eminence in the business and professional circles of the city, and it soon became almost essential for any man of standing in the community to have his portrait included in the set. My readers will at once see the importance of this to Mr. Strauss from a business standpoint, because, while it was not expressed in so many words, he, nevertheless, adhered to a rule that no one's portrait should be added to this collection unless the gentleman invested in one dozen of the prints of this size, which meant an expenditure on his part of at least $70, so that the presence of eight hundred individuals' portraits on the walls at the present time indicates that Mr. Strauss drew from this source at least $56,000 — quite a nice little sum to come into the coffers of the business, and that, too, from men, the sex that is notorious for avoiding facing the camera.

The gallery is devoted to living celebrities, and, therefore, on the decease of anyone, his portrait is at once removed from the collection, but Mr. Strauss soon found that he had to face another problem, because the near relatives of the deceased one naturally felt their feelings touched the next time they visited the studio, for they well knew the corner where their dear one's portrait hung, and on turning to the place found it now occupied by a strange face, and such remarks as, " Oh, you have taken down Ed's picture," were not infrequently heard in the reception-room. From a purely emotional point of view, Mr. Strauss did not like such comments, and there was also the business side to be considered, because, as every photographer knows, the negatives of deceased persons are generally valuable, more especially if the prints from them can be kept in evidence. The point became a very important one and was discussed very frequently by the staff at the noon-day meal in the " growlery," and at last the " In memoriam " album was the outcome. It has proved very successful. It makes the transition from the wall into oblivion an easy one, because it permits the portrait to be in evidence for about a couple of years after the death of the individual, and by this time the raw sore is healing, and at the same time the album has proved to be even more interesting to visitors than the pictures on the wall and almost every visitor lingers over it talking about such of their friends as have their likeness therein, and Mr. Strauss finds bigger orders for the portraits of deceased people than he ever did before.

F. DUNDAS TODD.

PICTORIAL COMPETITION No. 62.

I have just had a rather amusing experience with this competition — one that I think will rather interest my readers and so I will relate it. My eldest boy has just turned seventeen, and a few days ago I introduced him into the office so as to teach him a little business routine. He knows mighty little of photography, and he certainly can not be credited with possessing much artistic sense in a pictorial way, and so just for fun to myself I got him to select the best pictures, in his estimation. He protested his utter inability to award the prizes, but I informed him he was not asked to do that, all I wanted was his opinion, the selection for prizes would be the work of the regular judges.

When the actual judging took place the young man was more than surprised to find that their choice was exactly the same as his own. They, of course, were able to give reasons for their preference, he could not.

The following were the awards made:

First Prize — J. H. Field, Berlin, Wisconsin.

Second Prize — Mrs. J. C. Sheridan, Mishoppen, Pennsylvania.

Third Prize — George F. Mannel, 40 Montgomery street, San Francisco, California.

Commended — H. P. Dahlen, L. R. Clark (2), Curtis Bell (2), C. G. Brooks, H. N. Packard, H. G. Phister, A. H. Tolin.

PARTICULARS OF WINNING PICTURES.

First Prize — No particulars given, printed on platinum toned sepia.

Second Prize — Taken in July, 6 P.M., bright day, ½ second exposure with stop *f* 32 on Seed plate, printed on W. & C. platinum paper toned sepia.

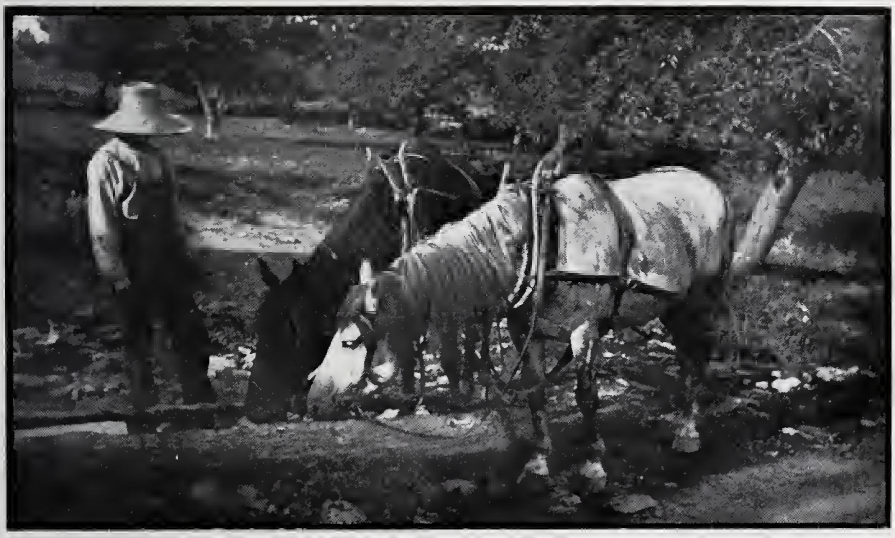
Third Prize — Made July, 1902, in bright light, on Eastman film, stop *f* 16, ¼ second exposure, printed on platinum paper toned sepia.

CRITICISM OF WINNING PICTURES.

The first-prize picture is a capital study in composition, and I would draw my readers' attention to the fine spacing that prevails throughout. The setting of the subject is in a frame of perpendicular lines, but curves predominate in the cat itself. I would draw particular attention to the different sizes of the various areas, for instance the window panes are large and small, and each is subdivided by a horizontal line into unequal sizes, while the lower is again broken up by the body of the cat and its reflection. Again note the horizontal line subdividing the shades unequally. The tone value throughout is capital. Each mass is distinct, but is full of gradation, and blends pleasingly into all the others.

The second-prize picture is specially successful in its tone gradations. The lines, if anything, run too much to the horizontal, but the boy and the tree on the right, by their upright lines, save the composition.

In the third-prize picture the same remarks almost apply. The tone value is excellent, but too many horizontal lines predominate, relieved only by the trunk of the tree.



Mrs. J. C. Sheridan. Mishoppen, Pa.

SECOND PRIZE.

FUTURE COMPETITIONS.

Competition No. 64 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

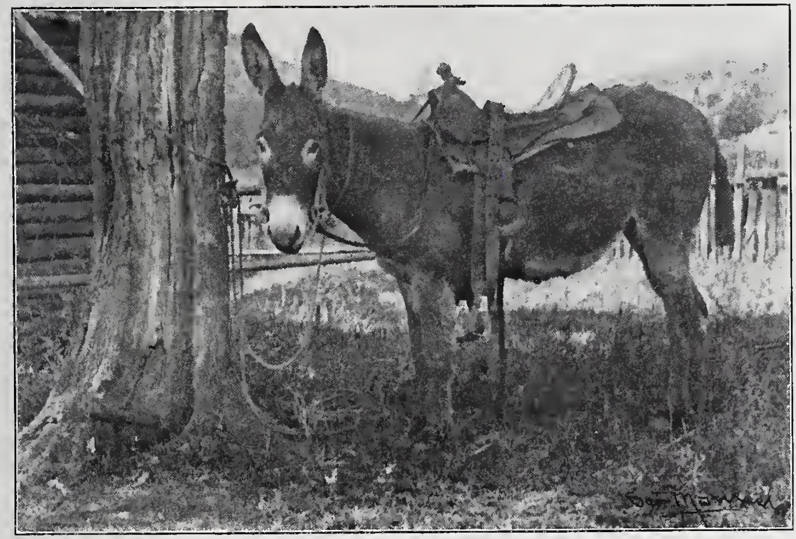
DEATH OF DR. E. L. WILSON.

In last month's issue we announced very briefly the death of E. L. Wilson, editor and publisher of *Wilson's Photographic Magazine,* New York. For many long years Mr. John A. Tennant has been associated with him in the conduct of that journal, and the following brief epitome of Doctor Wilson's life is from his pen:

Edward L. Wilson, editor and publisher of *Wilson's Photographic Magazine,* New York, and well known as the author of several standard text-books on photography and Oriental travel, died at Vineland, New Jersey, June 23, and was buried in the little cemetery of that town on Friday, June 26. By his death American photography loses one of its pioneer workers, who was prominently associated with its progress during the last forty years, and whose whole life was devoted to the practical helping of those who follow photography as a profession.

Edward L. Wilson was born at Flemington, New Jersey, in 1838, and received his education at the local academy. He began his work in photography at Philadelphia in the early sixties, being associated with Mr. Frederick Gutekunst, the veteran portrait photographer of that city. In 1864 he began the publication of the *Philadelphia Photographer,* then the only photographic magazine in America. At that time photography was in a transitional state, hampered by innumerable restrictions and abuses, infested by a class of men who, taking advantage of the little practical information available concerning the early processes, traveled the country over and sold so-called "secret processes" and "rights to use" certain formulæ. Photographers were also struggling under the burden of a stamp tax upon every photograph made, adopted as a means of revenue during the Civil War. The carbon patent and the photo-lithographic patents were also among the troubles of these early years. These abuses Mr. Wilson from the beginning endeavored to remedy and with complete success. His first service was to secure a modification of the copyright law of 1831 so as to include photographs. In 1865 he organized and led the opposition of the fraternity to the so-called "Bromid Patent." This fight prevailed during several years and eventually resulted in the upsetting of the patent, by which decision photographers were freed from a grievous tax. The stamp law was modified in 1866 and completely removed in 1868. In this year Mr. Wilson was foremost among those who organized the National Photographic Association, of which the present Photographers' Association of America is the successor. Of the old N. P. A. Mr. Wilson was the permanent secretary for many years, devoting to its service considerable personal labor and resources. The first exhibition and convention of the association was held in Boston in June, 1869. Early in this year the photographers united under Mr. Wilson to oppose the issuing of a patent controlling all methods of saving wastes from photographic solutions. The validity of this patent was challenged, and during the progress of the legal battle, which covered a number of years, Mr. Wilson was arrested in New York. Eventually the patent was overthrown, and Mr. Wilson received, at the Cleveland, Ohio, convention of 1870, the congratulations of the fraternity upon his victory. In 1873 the National Association held in Buffalo, New York, what was probably the most successful photographic gathering ever held in America. A special number of the *Philadelphia Photographer,* comprising some 224 pages, reported this convention in detail, being published within two weeks after the close of the convention — a remarkable journalistic feat at that time.

Immediately following this convention Mr. Wilson was appointed by the city of Philadelphia as a delegate to visit the Vienna Exposition of 1873 to awaken interest in Europe for the coming Centennial Exposition of 1876, held at Philadelphia. Returning to America, the National Association, through the *Philadelphia Photographer,* organized a movement to secure a separate building for photography at the Centennial Exposition. By Mr. Wilson's personal effort half of the sum necessary was contributed by the Centennial Exposition authorities, the other half being gathered by subscription among the fraternity. This resulted in the most wonderful exhibition of photography and its applications yet seen in America. The photographic concession of the exhibition was placed in the hands of Mr. Wilson and the late W. Irving Adams, under the name of the Centennial Photographic Company. This concern employed hundreds of workers and secured a complete photographic record of the exhibition from its inception to its close. We believe that the British government is the sole possessor of the complete collection of photographs comprising this notable record of the exposition, although many of the negatives are now deposited in the Commercial Museum, at Philadelphia. Later he also had charge of the photographic department of the Cotton Exposition, at New Orleans. In 1880 Mr. Wilson issued a special supplement to the *Philadelphia Photographer,* urging the organization of the new Photographers' Association of America, and calling attention to the promise of the dry plate being introduced at that time. The presidency of the new organization was offered to Mr. Wilson, but he declined, stating his resolution to devote the remainder of his life to his work in journalism.



Geo. F. Mannel. San Francisco.

THIRD PRIZE.

In 1882 he visited the Orient in charge of the largest photographic expedition ever attempted in those countries, visiting and photographing through Egypt, Arabia and Palestine. Returning to America he utilized the vast source of pictorial material thus secured in the lecture field and in the preparation of articles for the *Century* and *Scribner's Magazine.* His exploration of the buried city of Petra, in Arabia, was recognized by savants as a distinct achievement. In recognition of the value of his work in the East, as supplying lost links in Biblical history, the

Washington and Jefferson College, of Pennsylvania, honored him with the degree of Doctor of Philosophy. The results of his travels were afterward embodied in a work entitled "In Scripture Lands," wherein the best of his photographs were reproduced by the leading wood engravers of the modern American school.

From the beginning of his work in photography he evinced a wide and enthusiastic interest in the possibilities of the optical lantern as a mean of instruction, and did much to make stereoscopic photography popular among American people. His collection of lantern slides and stereoscopic views of America and European countries was probably the most comprehensive ever brought together in America. During these years the publication of the *Philadelphia Photographer* was continued, and in addition Mr. Wilson undertook the editing and publishing of the *Photographic World* and the *Magic Lantern,* the latter being, we believe, the first periodical devoted to this branch of photography.

In 1885 the name of the *Philadelphia Photographer* was changed to *Wilson's Photographic Magazine,* and the office of publication removed to New York, where it was published as a semi-monthly, and later as a monthly magazine. During the years 1881 and 1893 Mr. Wilson wrote and published his well-known text-books on photography, which have enjoyed an unusually large sale in America. Of these, Wilson's "Cyclopædic Photography," known to some of our readers, may be mentioned as probably the most comprehensive work on photography in the English language. After the removal of the magazine to New York, Mr. Wilson steadily continued his labors as a photographic journalist until his death, recognized by all classes of photographers as one of the fathers of American photography in the truest sense of the phrase. He had an enormous capacity for work, and his various publications will remain as a monument to his indefatigable ability in photography. A man of high ideals and sterling integrity, he had a lovable personality and possessed in an unusual degree the faculty of attracting the enthusiastic support of those with and for whom he worked during his long life. He leaves a gap which it will be difficult to fill, and his death will be mourned as a personal loss by all who touched his life and work.

HOW TO MAKE A CONVENIENT DARKROOM.

The writer, like many ordinary amateurs, was quite unable to develop plates, etc., during the daytime on acount of not having a darkroom or a room that could be used permanently as such.

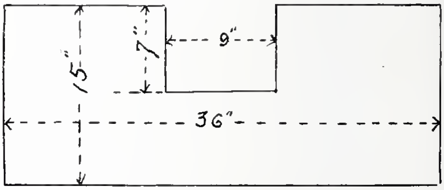


Fig. 1.

Not caring to shut myself up in a stuffy closet or clothespress, and having more or less time during daylight to develop, I devised the following so to speak portable and convenient arrangement.

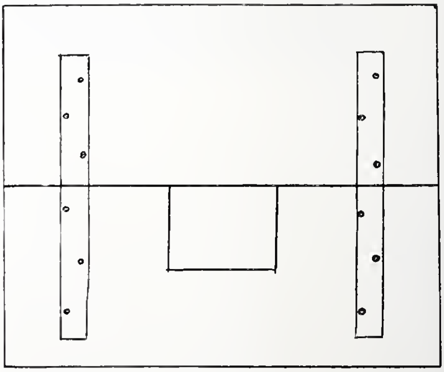


Fig. 2.

This can be applied to any bedroom or other room window, and is readily put up and taken down.

I had a small room with one window

30 by 56 inches. I procured at the lumber dealer's two boards of white wood 36 inches long by 15 inches wide and ¾ inch thick; one board 36 inches by 12 inches by ¾ inch, dressed on all sides, and from the stock dealer one piece each of orange and ruby glass, 8 by 10 inches. These, together with two long hinges, a yard of black canton flannel, a few screws and a couple of screw-hooks and screw-eyes, complete the list of material needed.

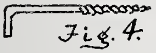


Fig. 4.

Taking one of the 15-inch boards I cut out a piece at the center, making a hole 7 by 9 inches, as shown in Fig. 1. I now took the two 15-inch boards and laid them together and with two strips of wood split from the end of a soap box I screwed the boards tightly together (see Fig. 2). On the side opposite the strips screw the hinges which are also fastened to the 12-inch board. This board forming a shelf on which to work (see Fig. 3). Two small nails with heads cut off are driven into each end of the part containing the hole. Two of these fit into two screw-eyes in the window frame, and two screw-hooks, like Fig. 4, turn down over the second pair of nails (see also Fig. 3). The pieces of glass are fastened over the 7 by 9 hole with tacks, or a neater job is done by letting them into the wood to come a little below the surface and then using putty.

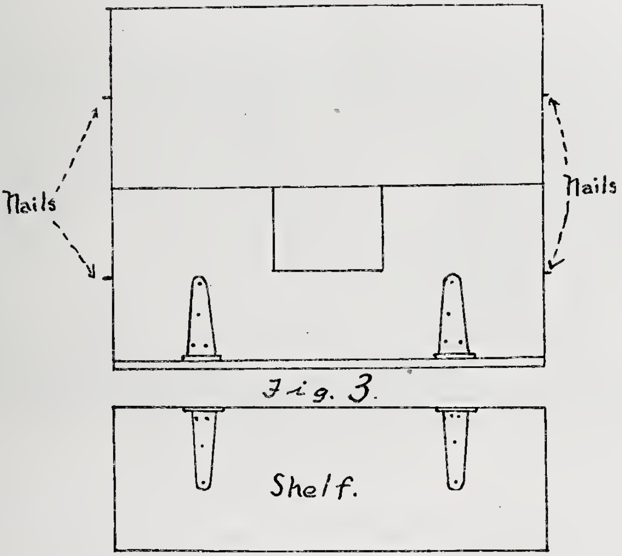


Fig. 3.

Take the black cloth and have a small hem sewed on the cut edges to prevent fraying, the other edges are protected with the selvage.

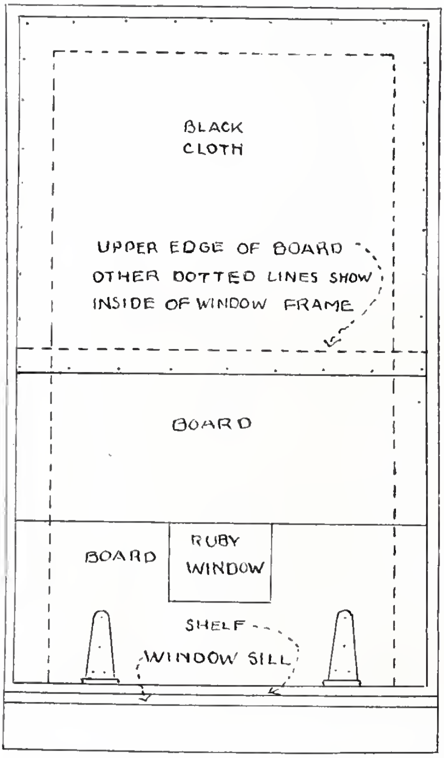
Being possessed of the necessary facilities, I put in eyelets spaced about five or six inches apart, but ordinary holes will do. Small brads are now driven into the window casing and into the boards containing the ruby window. These brads are spaced to correspond with the holes in the black cloth and are set back far enough to stretch the cloth tightly.

The regular window shade may be drawn down over this cloth and the light will be effectually shut out.

If the two 15-inch boards are not tight enough or even as a precaution strips of black paper taken from a dry-plate box may be pasted along the joint; also several thicknesses of cloth or a piece of felt may be placed between the bottom of the boards and the window sill.

If the room has but one window, you will find on shutting the door that it is converted into a first-class darkroom. Any other windows may be darkened with blankets, etc.

The advantage of this arrangement is the ease in putting up and taking down, and its compactness, there being no small parts to be lost and the total cost less than $1.50.



The screw-hooks and screw-eyes may remain in position, as also may the brads if driven in short and not interfere with the ordinary use of the window.

F. R. SMALLING.

HOT WEATHER TROUBLES OF PLATINUM PRINTING.

The production of good platinum prints depends upon several important conditions; one is that the atmosphere should not only be dry, but not too hot. The difficulties usually encountered are due to the fact that it is not the platinum salt itself that is affected by atmospheric change and temperature, it is the ferric salt or salts that form the actual sensitive coating of the paper, the quantity of platinum that is deposited by development is due to, and dependent upon, the action of light in changing the ferric salt into the ferrous. The longer the exposure the greater the change in the ferric salt, so that overdevelopment can not take place unless there has been overexposure, the quantity of platinum deposited will be proportional to the quantity of ferrous salt formed by the chemical agency of light, when brought into contact with a free oxalate, such as a solution of potassium oxalate. During the hot weather the chemical changes that take place with ordinary platinum paper is more rapid and decided than during a colder part of the year. Both heat and moisture aid in bringing about these changes, particularly where the pads that back up the paper are at all damp.

An excellent plan to adopt, one that is at all times thoroughly reliable, is to place a piece of thin celluloid upon the back of the platinum paper before adding the usual felt or paper backing. When a print so protected is placed in strong sunlight it will not matter how hot the negative and frame become, no moisture can reach the platinum paper. By adopting this means the prints will develop with great uniformity, owing to this simple precaution of keeping the paper dry.

One of the causes of bronzing is due to the presence of moisture during printing, as well as the degrading of the high lights, and the yellow tinge so often experienced in the whites of platinum prints during hot weather is due to moisture aided by heat in forming one of the lower oxides of iron which can not be cleared by the use of muriatic acid nor by continued washing, but may be prevented by the use of a specially prepared developer, made up as follows:

Potassium oxalate	8 ounces.
Phosphate of soda........	2 ounces.
Oxalic acid (C. P.)......	½ ounce.

Place these chemicals in a gallon stoneware jar and pour upon them sixty ounces of *boiling* water; stir well with a strip of glass, and allow to become quite cold. It is a good plan to make this up in the evening for use the following day. It should be filtered before using.

The oxalic acid will dissolve any trace of the lower oxids of iron at the time of development, producing pure high lights.

The tray containing the developer should be placed in a larger tray containing ice water with a few pieces of ice packed in it to compensate for increasing temperature.

The developer should never be made too strong for use in hot weather, because there is always a tendency for crystals of potassium ferric oxalate to form, and when these crystals are present, white spots and cometlike streaks are produced. The remedy in such a case is to dilute the developer with water only and filter before use.

Another difficulty which occurs in hot weather is the formation of gray patches over the surface of the print, which only become visible upon development. This is due to some foreign substance upon the surface of the negative and can be remedied by rubbing the face of the negative over with a piece of canton cotton, then coat the negative with any good hard varnish. The writer experienced this difficulty last summer with a number of 8 by 10 negatives which produced perfect prints several months previous in cold weather. The above plan entirely overcame the difficulty.

Care should be taken in the handling of the negatives if the hands have been in contact with any of the negative developing chemicals, because there are a number of these that will affect the iron salts of platinum paper if only the merest trace remains upon the negative, the action of which is greatly accelerated in the summer time, often producing black specks all over the print.

If any difficulty is experienced in securing pure whites in platinum prints during hot and damp weather the following will prove both beneficial and effective: Procure a few ounces of c. p. chlorid of potassium, dissolve one ounce in four ounces of water, add two ounces of this solution to the developer and it will be noticed that the whites will be greatly improved, while at the same time it will prove in nowise detrimental to the developer. Resort to the use of potassium chlorid should only be made when the whites do not come up to the standard with the ordinary developer.

By the addition of more phosphate of soda the rate of development can be easily checked. This is also accomplished by reducing the temperature.

In the development of views or marine subjects a beautiful tinge of

Clarence G. Brooks. Malta, Ohio.

light blue can be given to a platinum print in the process of development, but in this case a portion of the developer must be set aside for the purpose. Make up a solution of ferridcyanid of potassium (red prussiate of potash) sixty grains to an ounce of water. Add half an ounce of this solution to sixteen ounces of the platinum developer. Just as soon as the print is immersed in this solution and development proceeds, it will be observed that a decided blue tint pervades the whole of the picture, which, upon being cleared by the muriatic acid bath, produces a very pleasing effect. A darker tint may be produced by a further addition of the ferridcyanid solution.

The blue color is a deposit of prussian blue. This color being of a very permanent character is admirably suited to be in combination with platinum. Marine views made by the platinum process are improved considerably by this plan of development producing most charming effect.

If it is desired to prepare a suitable varnish for gelatin negatives that will withstand the intense heat of the sun the following will be found to meet the requirements:

Wood alcohol	14	ounces.
Amber shellac	1½	ounces.
Venice turpentine	1	drachm.
Gum sandarac	1½	ounces.

These should be placed in a clean, wide-mouthed bottle, with a good fitting cork, and allowed to stand in a warm place and shaken occasionally. When all the gums are dissolved, allow the whole to stand aside for a week, so that the particles of dirt may subside. At the end of this time carefully decant the clear varnish into a clean, dry bottle and it will then be ready for use.

The negative must be warmed before this varnish is applied, and the drying finished by heat. It is advisable to perform the varnishing a day before using the negatives for printing, because this allows the film to become thoroughly set and hard. Negatives treated thus are capable of resisting hard usage much better than those that have not been similarly treated. Some brands of platinum paper show a greater tendency to bronzing in the shadows. This can be remedied by the addition of fifteen drops of glycerin to twenty ounces of developer. Bronzing is often caused by excessive heat and moisture combined.

A. J. JARMAN.

HÜBL ON DEVELOPMENT.

According to a half promise made some time back, I give herewith a brief digest of Baron Hübl's book on development, and hope that it may interest some readers, even if it does not elucidate any moot point. Let me add that, in order to avoid an irritating repetition, I shall merely give the digest, without constantly repeating "the author" or "Hübl."

The action of light on a sensitive surface of silver bromid is the formation of a latent, or invisible, image, which is of such a nature that certain chemicals, called developers, can reduce the same to metallic silver more readily than the silver bromid not affected by light.

The exact change that takes place in the light-affected bromid is not known. One theory is that a sub-bromid of silver is formed, and this is supported by the fact that bromin water will destroy the action of light by applying the sub-bromid with another molecule of bromin to replace that split off by light.

Another theory assumes that minute traces of metallic silver are actually formed by the action of light, and that, in contact with the developer, these silver particles set up an electrolytic action, which causes the reduction of the bromid to visible metallic silver. Against this theory there is the fact that an exposed plate treated with nitric acid — which dissolves metallic silver, and would, therefore, dissolve the silver "keim" or minute traces — can be still developed.

Another theory assumes that the silver bromid undergoes merely a physical change — that is to say, the attraction between the molecules of silver and bromin is merely loosened, so that the

P. H. Dahlen. Terre Haute, Ind.

developer completes the loosening. This, however, is not supported by the fact that bromin destroys the latent image.

Exposed silver bromid is more readily reduced than the unexposed, but if development be prolonged then this latter is attacked and the result is "fog." Some kinds of silver bromid fog much quicker than others. As a rule, the slower the plate the less likely it is to fog, and the faster the plate the more readily it will fog. But this is not a fixed rule. A slow plate may fog quicker than a fast one, and if this is the case it is due to faulty preparation of the emulsion. But the fogging of a plate may be due to the developing solution, and if this is not correctly compounded then a foggy result may be obtained on an otherwise clean working plate.

(Let me here add a brief comment that may make this clearer to the beginner; the expert will know as much as I do, and can skip this note or else derisively smile at it. If we imagine the silver bromid to be balls of matter rolling up a narrow inclined plane, at the top of which is what is called the fastest plate, then we may easily grasp the idea both of "speed" and "fog" if we remember that a push of the ball will send it toppling off the board and convert it into metallic silver. By various methods of manufacture the platemaker rolls his silver bromid as near the top of the incline as he can, without making it topple off, but the higher he rolls it up the larger the ball grows, and therefore the more difficult it is to keep it on the narrow board, and obviously when he gets it near the top, not only can the shortest light action and the weakest developer — that is, the slightest push one side or the other — knock the ball off the board, but it is more difficult for the ball itself to keep on, and we thus get rapid plates that fog and that will not keep. This explains increase of fog with increase of speed. But what about a foggy slow plate? Well, suppose the platemaker, instead of pushing the ball straight up, puts a bit of side on it — all billiard players will know what this means — that is, suppose he does not push it fair and square in the middle, but gives it unconsciously, and in all cases unwillingly, an extra push to one side or the other, the ball will soon fall off the board before it has gone any way up the incline, and thus we get "fog" with a slow plate.— E. J. W.)

Most of the developers — that is, the actual substances which reduce the bromid to the metallic state — are hydroxyl or amido derivates of benzole, and nearly all of them have their reducing action strengthened by the addition of an alkali. Now everyone knows that all compounds of benzole are what are called "organic" compounds. To the "inorganic" or, speaking in common phraseology, to the metallic compounds, we are indebted for only two developers — the one ammonio-oxid of copper, which is of purely theoretical interest, and the other ferrous oxalate (a developer which I am, I believe, correct in saying is not used for negative-work by one in every one hundred thousand amateurs.— E. J. W.).

Each developer* has its own characteristics, which make it applicable for special cases, and it is only of recent date that anything like a careful study of these has been made.

One of the most important properties of a developer is its "rapidity," which is dependent on the peculiar nature of the developer, the concentration of the developing solution, and the temperature. The more rapid a developer acts, the shorter, of course, the duration of development.

Now we may translate "rapidity" in two ways — first, by the necessary time taken to give a fixed amount of density, or the time taken to give the most details in the shadows, in which case the density is entirely ignored; and it is in this sense that the word "rapidity" is used in these notes.

There are two main classes of developers — the first, the slow and gradually-acting, such as glycin, hydroquinone, diogen, etc. In these the plate remains for some time unaffected, then the highest lights appear, then the half-tones, and finally the details in the shadows. The second class of developers is the rapid ones, in which high lights and half-tones appear almost simultaneously, and very soon after the plate is immersed in the solution, and then the details in the shadows appear quickly. Metol, amidol, rodinal, etc., are examples.

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* Kindly note that the word "developer" is used *throughout* for the actual reducing agent, and not for a particular solution.— E. J. W.

"Developing power" is the capability of developing very faint light action. The shorter the exposure required to give a perfect negative with a given developer, the greater the "developing power"; but as every developer will, if given time enough, develop the faintest action of light, all developers actually have the same developing power, but in practice it will be found that, with some developers, fog will be caused before the faintest impress of light is developed.

Dr. Andresen has proved that there are many substances which can be used as developers, but as they possess this peculiar characteristic — that is, the development of fog with the light action—they are of no practical value. Those agents actually used as developers also differ in respect to this; *but with suitable methods of use, all the ordinary developers have the same "developing power," and a badly underexposed plate is hopeless, whatever it is developed with.* (The italics are mine.—E. J. W.)

The character of the negative depends on the "gradation"—that is, the height of the steps between one density and another, and also on the total height of the steps. Some developers give the height of each individual step, and the total height of the steps as low or "flat"; others give them steep or "hard." These terms are in practical work purely subjective, and depend so much upon the character of the plate, illumination of subject, exposure, composition and temperature of the developing solution, that it is only by such

Lewis R. Clarke, Lynn, Mass.

careful work as that of Hurter and Driffield, Eder, and others that one can form any really correct judgment on this point. (This explains my previous statement that I placed no reliance on an ordinary negative and that I insisted on *measured* readings.— E. J. W.)

One of the most important features of a developer is its "adaptability." By altering the ratio of ingredients and by the addition of certain substances the method in which the developing solution acts may be varied in more or less wide limits, and thus the gradation of the negative may be altered.

Dilution of the developing solution usually lowers the rapidity of developing — (That is, alters the time-development factor.— E. J. W.) — and also lowers the density. The addition of an alkaline bromid (potash or ammonia) lowers the rapidity and generally increases the density of the high lights. If more alkali is used, as a rule denser negatives are obtained, although the total duration of development is shorter.

Temperature is an extremely important factor, and the lower it is the slower the developing solution acts; the less fog there is, the density is sometimes unaltered but sometimes is less.

The rapidity of a developer generally gives a good clue as to its "adaptability"; the quicker the developer acts the less sensitive it is to restrainers, whilst slow developers are very sensitive to restrainers — for instance, metol is very slightly altered in action by the addition of a lot of bromid or cooling to freezing point, whilst glycin is very strongly affected by both.

Hübl's notes on the theory of development and the use of ferrous oxalate I have not abstracted, the former because it would absorb too much space, and the latter because I think very few use it.

The organic developers consist of practically two classes:

I.—The Phenols.

Hydroquinone. }
Adurol = monobromo-hydroquinone. } Dioxybenzoles.
Pyrocatechine. }
Pyrogallol = tryoxybenzole.

II.—The Amido-Phenols.

Para-amidophenol.
Metol = methyl. } Derivatives of
Glycin=amido acetate. } amidophenol.
Amidol = diamidophenol.
Reducine = triamidophenol.
Diphenal = diamido-oxy-diphenyl.
Eikonogen = amidonaphtholmonosulphonate.
Diogen = amidonaphtholdisulphonate.

Then there are the two mixtures —

Ortol = o-amidophenol + hydroquinone.
Hydramine = phenylendiamin + hydroquinone.

The aqueous solutions of these developers readily absorb oxygen from the air and turn, more or less, dark brown, and, if the solution is rendered alkaline, this takes place more quickly still; acids, on the other hand, prevent, or at least delay, this.

Amidol and reducin form by oxidation alkaline reacting substances, and, therefore, will develop in neutral or even faintly acid solutions; but it is necessary to use also some substance which will absorb the bromin given off from the silver bromid, and sodium sulphite is generally used.

The characteristics of the developing solutions are dependent to a great extent on the quantity and the concentration of the alkali used, and, therefore, it is necessary to enter into some theoretical points before dealing with the practical portion.

The more alkali is used the quicker the development. The caustic alkalies act the strongest, and then the carbonates, and finally the alkalin salts, such as borax and bicarbonate of soda or potash, these latter three not being sufficiently alkaline to produce good results. With increasing quantities of alkali there is at first a rapid increase in speed of development; then the increase in speed gets less and less, and experiment has proved that about five per cent of potassium carbonate is the maximum that should be used, and about four per cent of *anhydrous* sodium carbonate. (I have italicized anhydrous so that no mistake should be made. One part of anhydrous is equal to 2.07 parts of crystallized sodium carbonate. It is impossible to state the exact equivalent of washing soda, because this is of uncertain composition.— E. J. W.)

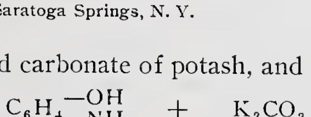
A developing solution of 1 g. of glycin in 100 c.c. of water was used with different quantities of potassium carbonate, and the following was the duration of development:

With 1 g.	potass.	carb.	40	minutes.
" 4	"	"	... 15	"
" 8	"	"	10	"
" 16	"	"	 9	"

This shows very clearly the sudden rise in speed and then the gradual rise, and it must not be forgotten that such quantities as sixteen per cent — which means, practically, 77 grains of alkali to the ounce — would have a very prejudicial effect on the skin and the gelatin.

H. N. Packard, Saratoga Springs, N. Y.

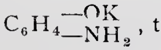
With caustic alkalies, the hydrates of potash and soda, considerably less is required — 0.5 to 0.75 per cent of caustic soda, and 1.4 times this quantity of caustic potash. The difference in behavior between the carbonate and caustic alkalies is due to the formation of phenolates with the caustic alkalies, and these act directly on the silver bromid; whereas, if a carbonate is used, they are not formed, and the solution contains both the developer and the carbonate; thus, take para-amidophenol and add carbonate of potash, and we get



$$C_6H_4\begin{matrix}-OH\\-NH_2\end{matrix} \quad + \quad K_2CO_3$$

Para-amidophenol. Pot. carb.

but if we use caustic potash, we get



$$C_6H_4\begin{matrix}-OK\\-NH_2\end{matrix}$$

, the phenolate of potash.

To prove how much extra caustic

alkali should be used, hydroquinone was saturated with enough caustic soda to form the phenolate, and then additional caustic was added, and the times of development were:

		Minutes.
Hydroquinone phenolate soda		6
"	+0.5 g. caustic soda	5
"	+1.0 " "	4

and, therefore, one should never use a greater excess than 0.5 per cent of caustic soda.

Taking into consideration the formation of the phenolates, the following table gives the necessary quantity of caustic soda for every 10 grains of the developer:

10 g.	pyrogallol*	require	9.5 g.	caustic	soda.
"	pyrocatechine	"	7.2	"	"
"	hydroquinone	"	7.2	"	"
"	diphenal	"	5.0	"	"
"	glycin	"	4.3	"	"
"	adurol	"	4.2	"	"
"	para-amido-phenol	"	2.8	"	"
"	metol	"	2.3	"	"
"	eikonogen	"	1.5	"	"
"	diogen	"	1.2	"	"

If caustic potash is used instead, then the above quantities must be multiplied by 1.4.

If the correct quantities of caustic alkali be used for each developer there is no danger of the skin or gelatin being attacked.

Metol and pyrogallol are the only two developers which are unsuitable with the caustic alkalies, as they cause fogging of the plate and oxidize very quickly. Frequently, developing solutions made with the caustic alkalies keep better than those with the carbonates.

Sodium tribasic phosphate was suggested by MM. Lumière, but it acts almost exactly like caustic soda and presents no advantages.

Acetone, also suggested by Lumière, in the presence of sodium sulphite forms phenolate of soda, and the developing solution contains no free alkali; but, though they keep well, yet they work very slowly, and to some people the smell of the acetone is exceptionally unpleasant.

Ammonia can only be used with pyrogallol; with the others it works very slowly, gives thin negatives, and frequently causes fog.

The next important question is the amount of the developer to be used, and, it having been determined that five per cent of potassium carbonate is correct, it is easy to determine the other. If too little be used, development is slowed; if too much, it is wasted. The greater the amount added the quicker the development, but this does not increase *pari passu* with increase of developer. Two experiments were made, the quantity of alkali being kept constant and increasing quantities of developer used, the production of details in the shadows of the negative being considered. The results were:

Glycin.	Duration of development. Secs.
0.3 per cent. glycin	540
0.5 " "	360
0.7 " "	315
0.9 " "	280
1.1 " "	265
1.3 " "	250

so that about one per cent of glycin gives the maximum.

Metol.	Duration of development. Secs.
0.25 per cent. metol	100
0.50 " "	70
0.75 " "	50
1.00 " "	45

therefore about 0.6 per cent of metol is the maximum.

Assuming 0.6 per cent of metol to be correct, the following table has been calculated out for the other developers with a 100 c.c of five per cent solution of potassium carbonate, and against the calculated is put the quantity generally used in practice:

	Quantity in grammes for every 100 c. cm. of developing solution. Calculated.	Usual.
Metol	0.6	0.6
Pyrocatechine	0.6	0.6
Hydroquinone	0.6	0.5-1.0
Amidol	0.4	0.4-0.8
Para-amidophenol	0.5	0.4-0.7
Pyrogallol	0.5	0.3-0.6
Eikonogen	0.9	0.8-1.5
Adurol	1.0	1.0
Diogen	1.2	1.2
Glycin	0.5-1.7	1.0

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* It will be remembered, as stated in the last "German Notes," that Valenta has recently pointed out that, to saturate only one of the phenolates, less caustic alkali is required. Thus, to 10 g. only 3.2 g. caustic soda and 4.6 g. caustic potash, and a fairly stable developer is obtained, which is not the case if the triphenolate is formed as above.—E. J. W.

It will be seen that the theoretical quantities agree fairly closely with those of practice, though, as a rule, hydroquinone is used too strong in order to force its action, and amidol and para-amidophenol too little, and more may be used.

Oxidation of the developer means loss of developing power, and sulphite is used to prevent this, and the quantity should depend on the rapidity with which the developer oxidizes. Pyro, metol, and amidol require the most — about ten times their weight; whilst glycin and hydroquinone require the least — from three to five times their weight. With caustic alkalies more sulphite is required, and, if the quantity of alkali is increased, then the sulphite should be increased. Potassium metabisulphite is an acid salt, and if it is used it neutralizes some of the alkali, forming plain sulphite, and, therefore, the quantity of alkali must be increased. One grain of metabisulphite neutralizes 1.2 grains of potassium carbonate, or 0.36 grains caustic soda, or 0.5 grains caustic potash; therefore this gives the necessary increase in alkali.

Stock solutions, if two are used, certainly allow one to adapt the developer to one's requirements; but they entail a lot of bottles, and the use of one solution which merely requires diluting with water has become more general, and is extremely convenient, and such solutions keep longer the more concentrated they are. If the carbonates are used, they keep longer than the caustic alkalies, and glycerin or similar substances enhance the keeping properties. Of course, if the stock bottle is frequently opened, the solution gradually turns brown, but this can be got over by using small bottles only.

Glycin keeps better than any other developer. Any developer may be rubbed up with sulphite and the alkali into a thick cream with glycerin, and then it can be kept in collapsible tubes.

In order to make this abstract complete, I have included the table I have already given (see previous page).

The following notes will make it more intelligible:

Plates were exposed under a tissue-paper scale for an equal time, and developed till a particular step of the scale appeared, without considering the density. The reciprocal of the time of development gave the relative rapidities. All the potash developing solutions were made according to the previously given table as regards the quantity of developer, and enough potassium carbonate was added to saturate the organic substance and give an excess of five per cent. The developing solutions with caustic alkalies had just enough of the latter added to form the phenolate compound. The temperature of the solutions was 20° C. (=68° F.)

By "density" is understood the density of the highest light, and it will be

DEVELOPER.	Duration of development in seconds.	Relative rapidity.	Relative density-giving power.	Restraint or slowing in seconds by			Influence of potassium bromide on the density.	Keeping power of the solution.
				0.2 per cent. pot. brom.	Cooling to 10° C.	Dilution with water 1 1.		
Pyrocatechin and caustic soda	15	100	0.6	5	10	20	Slight	0.
Metol and pot. carb.	20	75	0.8	5	10	0	Very slight	0.5
Hodroquinone and caustic potash	25	60	1.0	110	105	70	Slight	0.4
Amidol..	30	50	0.4	50	60	5	Considerable	—
Adurol and pot. carb.	30	50	0.6	30	45	25	"	0.6
Paramidolphenol and pot. carb.	40	38	0.5	70	30	30	"	0.5
Rodinal.	40	38	0.5	45	40	30	Slight	0.9
Pyro and pot. carb	40	38	0.5	35	55	40	Considerable	0.3
Glycin and caustic soda	45	33	0.6	90	70	125	Slight	0.8
Eikonogen and pot. carb.	50	30	0.5	85	55	80	"	0.6
Pyrocatechin and pot. carb.	60	25	0.5	140	60	70	Very considerable	0.6
Hydroquinone and pot. carb.	70	21	0.7	95	80	120	Slight	0.4
Diphenal	75	20	0.8	30	80	25	"	0.7
Glycin and pot. carb.	75	20	0.5	210	130	115	Very considerable	1 0
Ferrous oxalate	75	20	0.5	280	90	80	Slight	0.8
Diogen and pot. carb.	95	16	0 4	115	120	80	Considerable	0.7

noted that metol, hydroquinone, and diphenal give the densest high lights, whilst all the others are approximately equal.

As regards the developing power, scarcely any difference could be detected, and with sufficiently long duration of development the same details in the shadows could be obtained. Metol and hydroquinone are most prone to fog, but glycin works very cleanly, and cleanest of all is pyrocatechin; for this reason it is usual to use only two or three per cent of potash with metol. The unpleasant habit of hydroquinone of giving fog at high temperatures makes it less suitable for instantaneous work.

The adaptability of a developer is greater the greater the action of the bromids, dilution with water, and alteration of temperature. The alteration of the rapidity is a good guide for this. Dilution with water prolongs development, slowly at first, and then very much as shown by the following table when pyrocatechin and caustic soda solution was used:

			Seconds.
Normal developer..............			30
"	"	+ 1 part water	35
"	"	+ 3 " "	55
"	"	+ 7 " "	200

In order to test the keeping power of the developers, plates were first developed in the solutions, and then these were allowed to stand some hours exposed to the air, and some more plates of equal exposure then developed; and the ratio of the relative rapidities is given in the table, and 0.5 means, therefore, that development in the oxidized solution took double as long as in the fresh.

If the negative is to have a particular character, it is essential to know the peculiar characteristics of the plate used, and to choose a developing solution that will give the desired class of negative; for the action of the various developing solutions differs in the superficial action and that in the interior of the film — that is to say, one may give too much density in the high lights before the shadow detail is brought out to printable density, and another may give fog before the one or other or both are fully developed.

An overexposed plate flashes up, and, if development is continued so as to obtain a vigorous image, the whole is buried in fog and a flat result obtained. With an underexposed plate, on the other hand, the high lights go on developing before the shadow details appear, so that a hard negative is the result. An overexposed plate must, therefore, be developed as slowly as possible, so that the gelatin has time to swell and the developing solution penetrate into the film. A developer of high reduction power should be used, and a slow-acting one with great density-giving power should be chosen, and the rate of development slowed, not by dilution with water, but by the addition of restrainers and reduction of temperature.

With an underexposed plate a quick-acting developer of low density-giving power, which should be lowered by addition of water, should be used.

Suitable developing solutions would, therefore, be: for overexposed plates, a cold hydroquinone solution with plenty of bromid; and for short exposures, a solution of pyrocatchin and caustic soda.

With a slow developer, underexposure may be compensated for by diluting the developer, and for long exposures a stronger, cold, and rich in bromid solution can be used; but, with a rapid developer, overexposed plates can not be saved.

A preliminary bath of bromid with overexposed plates is of no advantage, as it stops the action in the film, whilst on the surface development proceeds quickly. The best way to treat overexposure is to first use a normal developer, and then to add plenty of bromid after the surface has developed. An old developer — that is, one that has been used — is also good.

It is far better to alter the rapidity of the developer by dilution with water than to attempt this by variation of the ratio of the alkali to the developer, as has been so long recommended.

For snap-shot exposures, the quick

developers—amidol, rodinal, and metol-potash — are preferable, and pyrocatechin and glycin with the caustic alkalies. For normal exposures, the solutions should be diluted with an equal volume of water, and if the plate has a tendency to fog, then the temperature should be lowered. Pyrocatechin and caustic soda is far away the best for really quick work. Bromid should not be used, as this keeps back the details in the shadows. If the negatives are too hard, more water should be added, or the plate may be soaked in water for a minute or two before development.

Courtesy of the *Bulletin du Photo-Club de Paris.*

Overexposed plates are best treated with the slow-acting developers — hydroquinone, glycin, eikonogen, and diogen — and the carbonates of potash and soda should always be used; and it is advisable to use a once-used solution with plenty of bromid, and to cool it with ice. If it then acts too quickly, more water should be used. With considerable overexposure the negative is always wanting in density, and it is advisable to develop so that the shadows are clear, and the negative can be afterwards intensified to printing density.

For plates of doubtful exposure the "stand development" system as suggested by Meydenbauer is of great value, as by it very great variations may be compensated for, and, with correct exposure, very delicate negatives with good high lights may be obtained without any tendency to hardness. Every developer is suitable for this process, but the least suitable is pyrogallol. Metol, amidol, and rodinal can only be used very dilute, and, in order to obtain sufficient density, development has to be prolonged from six to ten hours; glycin and hydroquinone give the same results in an hour. For glycin stand development, 0.2 of glycin should be used; this gives useful negatives with underexposure, and good negatives with correct exposure. If, by its use, an overexposed negative is seen, a strong, cold, and rich in bromid solution can be applied, and an overexposure of from three hundred to five hundred times can be saved. The diluted solution will keep unchanged for some hours, but this does not mean that many plates can be developed one after the other without alteration in character.

A glycin solution always remains colorless, and gives negatives of a pure gray color, and never causes colored fog. A variation of temperature between 0° and 20° C. makes practically no difference. It has but little tendency to give excessive hardness. All these properties make glycin extremely valuable for bromid paper, lantern slides, and chlorid plates.

1. The following is the formula for a concentrated glycin-potash developing solution or paste:

Sodium sulphite	2½ ozs.	25 g.
Glycin	1 oz	10 g.
Hot distilled water	4 ozs.	40 c.c.

Dissolve, and add gradually

Carbonate of potash	5½ ozs.	55 g.

Care must be taken to add the potash gradually, as effervescence is caused; or the sulphite may be dissolved in the cold water, and the glycin and potash rubbed up with it in a mortar. The result will be about 7½ ounces or 75 c.c. of a thick paste, which only requires dilution for use. The stock must be well shaken up before use, and if it at all, by keeping, turns brown, it does not lose in efficiency.

2. A concentrated glycin solution with caustic potash can be made as follows:

Potassium metabisulphite	1 oz.	14 g.
Caustic potash	1 oz.	14 g.
Distilled water	5¾ ozs.	80 c.c.

Dissolve, and add

Glycin	343 grs.	10 g.

About 7 ounces or 100 c.c. of a faint yellow solution is obtained, which does not keep quite so well as the above, but better than most other developers.

3. A concentrated pyrocatechin developing solution can be made thus:

Potassium metabisulphite	1 oz.	10 g.
" carbonate	1½ oz.	15 g.
Distilled water	4 oz.	40 c.c.

and add

Pyrocatechin	288 grs.	6 g.

and then, in a mortar, carefully rub up with it

Potassium carbonate	3½ ozs.	35 g.

A thin, pasty cream is formed, which keeps almost as well as the glycin developer.

4. Dr. Ellon recommends the following method of making a pyrocatechin developer:

A.—Sodium sulphite	1 oz.	100 g.
Caustic soda	63 grs.	14 g.
Distilled water	3 oz.	300 c.c.

Dissolve.

B.—Pyrocatechin	96 grs.	20 g.
Distilled water	1 oz.	100 c.c.

Dissolve and add B to A, and immediately pour the mixture into small bottles and cork well. It will keep in small bottles for a long time, but, exposed to the air, it quickly becomes brown without at first losing its developing power. (In all the above formulæ I have calculated 1 oz = 480 grains.— E. J. W.)

For Instantaneous and Portrait Work. Overexposure is hardly likely to be met with in these cases, and, therefore, a quick-acting developer can be used, and so we may use

Stock solution No. 4	1 part.
Water	10 parts.

Or,

Stock solution No. 3	1 part.
Water	25 parts.

The temperature should be 15° C. (= 60° F.). Bromid should not be added; if the plates fog the temperature should be lowered.

In place of the glycin-caustic potash solution, we may use the following:

Stock solution No. 1	3 parts.
Caustic soda solution (10 per cent.)	2 "
Water	100 "

In the pyrocatechin developer the plate will be developed in about four minutes. The glycin developer requires about double the time, but the character of the negatives is the same.

Correctly-exposed Plates.—For plates

which are known to be fairly correctly exposed, the glycin and pyrocatechin-carbonate solutions 1 or 3 may be used, diluted with from fifteen to twenty parts of water. Both work very clean, the latter double as quick as the former. With temperatures over 20° C. (=60° F.), from five to ten drops of a ten per cent solution of bromid should be added to every one hundred parts of developing solution.

If there is any doubt as to the correctness of the exposure, it is better to use the glycin and dilute with from fifty to eighty parts of water; with fifty times dilution the development will be complete in from twenty to thirty minutes. During such long development it is essential to keep the dish covered, or else the darkroom light will cause fog.

If a lot of plates have to be developed, it is advisable to use the upright grooved troughs, and, if these have a tight-fitting lid, the darkroom light can have no ill effects. There is another advantage in these troughs, and that is, there is considerably less surface of the solution exposed to the air.

This kind of stand development allows one to develop a very large number of plates in a short time. They can be occasionally half lifted out and looked at, and, when finished, they can be put in another upright trough to fix and others put in their places. From fifty to sixty negatives may thus be developed in three hours.— *E. J. Wall, F. R. P. S., in The Photographic News.*

BLUE PRINTS.

Ferro-prussiate paper, which is one of the simplest photographic papers both to make and to use, has many applications which though obvious enough when pointed out may not strike the practical worker without suggestion. I am, therefore, penning a few notes on these points:

Trial prints.— In the first place it is eminently suited for making trial prints from negatives. When making the print, a piece of paper about half an inch longer than the negative should be used, this additional portion being shielded from light during printing by a piece of opaque paper. The print is thus obtained with a white strip along one edge, on which can be written particulars of the exposure, subject, etc., of the negative.

Negative register.— These prints bound together in lots of twenty-five or fifty make a most useful negative register. The prints are numbered to coincide with the negatives themselves, and it will be found a great convenience to be able to turn up a positive copy of the negative, bearing particulars of exposure, character of negative, etc., instead of looking up the negative itself.

Printing on tour.— To the tourist in foreign countries who is anxious to make prints of those negatives which he develops en route, the process is to be commended. He may take a supply of paper sealed up, but better a small ruby bottle of sensitizing solution and a small sponge. A few minutes' work, after the development of the negatives at night, will place him in possession of the necessary paper on which to print from them the following morning.

Imitation tiles.—The similarity of the color of ferro-prussiate prints to that of the old Delft pictures makes them a fitting medium for preparing imitation tiles, as suggested by Oscar Bolle. Select suitable bold and vigorous subjects, and, after the prints are completed, mount on glass or well-seasoned wood. Next, size twice with glue (one part) dissolved in water (ten parts), and varnish with good " oak " or " church " varnish.

Decorative.— Many little knick-knacks can be ornamented with blue prints made on paper, card or other material. Bookmarks, made from slips of Whatman's rough drawing-paper, look very effective when they bear a neatly vignetted landscape, printed in Turnbull's blue.

THE SAN FRANCISCO PHOTOGRAPHIC SALON 1903.

The California Camera Club announces that in conjunction with the San Francisco Art Association, the Third San Francisco Photographic

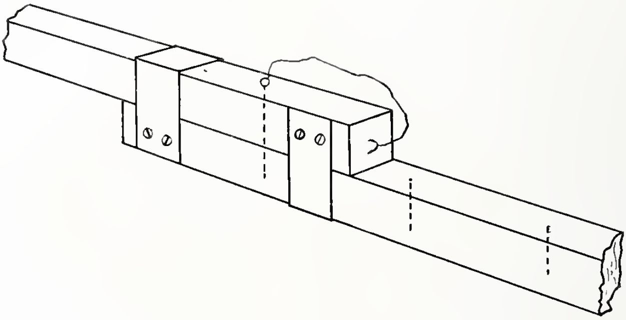
Salon will be held in the galleries of the Mark Hopkins Institute of Art, in the city of San Francisco, beginning October 8, 1903, and continuing two weeks.

All communications should be addressed to the Executive Committee of the San Francisco Photographic Salon for 1903, 819 Market street, San Francisco.

A CONVENIENT BACKGROUND.

All those amateurs who are interested in portrait work, and who do very much in this fascinating but difficult branch of the photographic art, must have been hampered at one time or another by the lack of a suitable background.

How often do we see amateur portraits, otherwise very creditable, spoiled by the setting? The piano, or a window or the wall-paper is much more in evidence than the face of the sitter, and in some portrait work I have seen the proper title would have been, "Puzzle, Find the Sitter."



Now, portrait work is at its best a very difficult matter, and if the amateur be hampered by the lack of background, reflectors, etc., his trouble are increased tenfold.

Having had occasion to make a considerable number of flash-light portraits at different times I very soon found myself confronted by the need of some sort of a background which should be large enough to use in group work, and still be light and capable of being packed into a small space for transportation. A suggestion in an old English periodical put me on the right track, and working from this I made the arrangement which I am about to describe, and which I think will be found satisfactory by whoever takes the trouble to construct it.

The materials needed as are follows: Two pine strips, 10 feet by 1 inch by 1 inch; one pine strip, 6 feet or 7 feet by 1½ inch by ½ inch; one strap hinge, 6 inches long over all; one iron door-bolt, small, with ½ inch screws; four strips of sheet iron or tin, 4½ by 1¼ inches; two dozen ½-inch screws. In addition to this list you will, of course, need some sort of cloth for the background itself, but we will leave that for the present and take up the construction of the framework which is to hold the background.

The two 10-feet strips should be sound, straight and free from knots. They should be planed smooth. These are for the standards or uprights to support the background. Saw them both in two in the middle and take off the sharp corners with a plane. Now, take the pieces of sheet iron (a piece of tin-can will suffice) and bend them all like this ⊔, making the middle part one inch in length. They can be bent very nicely over the edge of an inch board, or one of the 5-feet strips may be used. Hammer down the three sides so that the corners are square and the piece will slide easily on the inch strips. Now, lay two of the 5-feet strips together, place one of the tins so it clasps both strips and with a sharp-pointed wire nail punch two holes for screws on each side. Screw it in place near the end of one of the strips, not too tightly, but so that one strip may slide easily on the other through the tin guide. Attach a second tin to the other stick of the pair in the same way. A glance at the drawing will make this part of the work clear. The two strips, if the directions have been properly carried out, will now slide one upon the other, so that they can be closed up to measure only 5 feet in length, or drawn out so to be nearly 10 feet long.

Bore small holes at intervals of 6 inches clear through them to hold a pin, made from a bit of heavy wire or a wire nail. Attach this by a short string to the strips so that it will be at hand when wanted. This pin serves to hold the strips in place when extended to any desired length. A study of the drawing will make this point plain.

Now, treat the other two strips in the same way and we have the uprights or supports for the background.

Now, for the crossbar which carries the ground. Take the 6-foot strip, and, after marking the center, proceed to taper it down on one edge so that the ends measure about ⅞ by ½ inch, while the middle is still the full size, 1½ by ½ inch. Saw the strip in halves crosswise, and then screw on the hinge so that the pieces may be folded together or extended into one straight piece as it was before sawing.

You have probably already surmised that the bolt is to be screwed on the side opposite to the hinge to hold the strip rigid when extended.

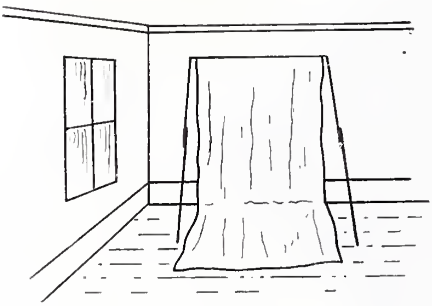
When buying this bolt get the smallest one you can, as it has no great load to support. A cheap iron one is the best. Screw it on one-half of the strip and the catch on the other, just as they are put on a door. I scarcely need explain it. Now, bore a ¼-inch hole about 1 inch from each end of this jointed strip, and a similar hole near the end of each pair of sliding strips. Tie them loosely together with stout cord and the framework for the ground is completed.

C. Pays, Courtesy of the *Bulletin du Photo-Club de Paris.*

As a material for the ground, if you do not mind expense, felt is the best, as it has a very good surface and comes "double width," or about 6 feet wide. Most of us, however, have to look out for dollars and cents, and so, for a cheap material, I would recommend cheesecloth, which costs but 5 or 6 cents a yard, and comes in a variety of colors. I use light blue or cream for a light ground and red or black when a darker effect is required. It is one yard wide, so for a 6-foot ground you need have only one seam. These seams, by the way, are the chief drawback to a home-made ground, for they will show more or less unless care is used. It is better to use two thicknesses of cloth of the same color, as cheesecloth, being so thin, allows the edges of the seam to show through when backed by cloth of a different color, and this, of course, makes an ugly dark line in the background. I found mosquito netting a very satisfactory material except for this fault, but this was such a drawback that I gave up its use.

I presume that cambric or some other cheap material could be substituted for the cheesecloth, the main point being to get a material without gloss and that will hang smoothly.

I would advise making the ground at least 12 feet long, as this allows it to be brought forward under the sitter when a full length portrait is wanted.



Having chosen your material and sewed it together, you may tack one of the 6-foot edges to the hinged strip, fastening the cloth on the *hinged* side, so that it will not interfere with the folding of the strip. Several thicknesses of cloth of different colors and materials may be tacked one over the other, so that any desired effect may be obtained.

It seems hardly necessary to explain how the ground is to be used, but a word as to the best way of managing it may be helpful. If, for example, your room is 10 feet high, draw out the uprights until they are nearly 10 feet long and pin them so they will not slide. Lay the whole arrangement on the floor with the top or crossbar near the wall of the room and the sliding bars at right angles to it. Now, let some one take hold of one of the uprights while you manage the other and lean them both against the wall. Thus they form props or supports for the bars which carry the ground, and the latter will hang smoothly down against the wall. A wire nail driven in the bottom end of each upright and filed to a point like the spike in the end of a tripod leg, will prove useful to prevent slipping. It will be seen that this device may be quickly set up in any room and in any favorable position where there is a wall to support it.

In conjunction with this I use a reflector of white muslin, made in the same way, but smaller, so that it can be propped against a chair or table whereever it is needed.

Lest my directions be misunderstood I append a sketch of the arrangement in use. I trust that this hint may prove of service to some of my fellow amateurs, and that they may derive much satisfaction from the use of a background made as I have suggested.

Chester M. Whitney.

THE BOSTON CONVENTION.

The New England Association announces its seventh convention to be held at Boston, August 19, 20 and 21. We anticipate a repetition of former successes and will not enter into details as our past record assures all who attend a profitable and pleasant time.

We extend a cordial invitation to the profession everywhere, north, south, east and west. We will welcome you, do our best to entertain you and make your visit beneficial. Rate of fare is one and one-third, offered on all railroads as far west as Chicago and St. Louis and as far south as Washington, on certificate plan. The Secretary will be glad to give information or send program on application.

Geo. M. Bolton,
Rockville, Connecticut.

M. Bucquet, Courtesy of the *Bulletin du Photo-Club de Paris.*

HOW TO USE OLD VELOX.

Some time ago the writer was presented with a batch of old Velox paper, which, through carelessness in ordering, had been an overstock in a photo-supply house. The bulk of the paper was rough and special rough, papers to whose use I had been addicted in the past, and I accepted the gift for experimental purposes, the results of which follow:

First, we corresponded with the factory, and were assured the paper had, at least, no commercial value. We then selected a test negative of good contrasts and masked the plate so that a white margin would appear on each plate. Taking some fresh paper and a concentrated metol-hydroquinone developer, we made prints until the matted portion was clear white, of course, using a bromid of potash solution until crisp tones resulted. Noting the time of development we went on to the exposure of the old paper. The result was as expected, a wholesale fogging, even in those parts matted out, which did not receive any light.

As most readers are aware, the gaslight papers in general are made in two speeds. The faster emulsions take longer to develop, but give softer results than the ordinary ones. More bromid is usually necessary with the quick emulsions.

The development of Special Velox is ordinarily finished in thirty to forty seconds. These are facts of experience and the correct exposure on such emulsions is that which develops fully in such a time, with good blacks and clear whites. Workers in Velox will find this method much preferable to the arbitrary one of so many seconds at such a distance, etc. Prints taking longer to develop are probably underexposed and vice versa.

Returning to our subject matter, we can see the paper must not fog (from the developer alone) inside of forty seconds. A piece of the underexposed old special rough fogged in twenty seconds and turned greenish black and mottled. We then added more bromid to the developer.

The normal developer contained about ten drops of bromid solution to each ounce. This solution contained one ounce of bromid with nine ounces of water, a true ten per cent solution, since it contained one-tenth of its weight in bromid.

The addition of about five drops per ounce lengthened the time of fogging on the old paper. When thirty-five drops to the ounce were used, the fog did not appear for fifty seconds. Exposures were then made with the test negative and the development was complete in about forty-three seconds. However, the tone was unpleasant, and we further increased the bromid. More was added until the developer was saturated with bromid, sixty drops to each ounce. Clean prints resulted with vigorous contrast and an admirable tone.

The developer, it will be noted, contained six times the normal quantity of restrainer. Even better results were had in later experiments by making up a developer with less alkali, which developer is also excellent for plates known to be aged.

Similar experiments were applied to the rough papers, in the regular speed. This class needed less bromid and more exposure to get good prints. Since emulsions vary, it was found necessary to balance the developer for each different emulsion.

Summarizing the experiments to the form of directions, we would say with Special Velox, take a strip of the paper and note the first fogging in seconds from immersion in the developer. This should take over forty seconds on emulsions which are fresh. If fog appears in less time, increase the percentage of bromid till the paper will keep clear three-quarters of a minute. Next make exposures with the standard test negative until the print comes to full density in less than the fogging time. If development is longer, the whites must, of course, discolor. If the tone is not yet satisfactory a further increase of exposure and bromid may be necessary.

For regular emulsions, the same principles apply. Development, however, is more positive. The picture comes quickly to full density and then stops, whereas special emulsions develop more gradually. Fogging ought not to appear in less than thirty seconds on regular carbon, rough or glassy Velox.

In making the tests with unexposed paper, it is wise to half immerse the strip in the developer. Then if fogging occurs slightly we can easily distinguish it against the dry, white end.

The tones on the old paper are extremely handsome. Rich greens and warm blacks were obtained with ease. One must avoid overexposure. This brings mottled, rusty brown, images. Decided greens may be obtained on special rough and are excellent on certain subjects, like marines.

Speaking of colored tones brings to mind some beautiful sepia effects upon rough Argo papers for soft effects. The developer used was an Ortol Soda developer made from the prepared cartridges. The developer was strongly restrained, and the exposures rather full. By removing the print at the right instant a rich brown tone was obtained with clean, clear high lights.

On some prints we were troubled with "pencil marks," a defect which looks like hairs imbedded in the emulsion. Rubbing with wood alcohol and a tuft of cotton removes them, as well as any slight traces of fog.

CHESTER F. STILES.

WANTED—NEGATIVES.

IT may be of interest to some of our readers to know that the American Aristotype Company are on the lookout for good 5 by 7 view negatives, either landscape or marine. As they will use these negatives for advertising purposes, they must be of good Platino quality — clear shadows and snappy high lights. The view must be attractive — something that will catch the eye. Should our readers have negatives of this character which they wish to dispose of, we would suggest that they send proofs and price to the American Aristotype Company, Jamestown, New York.

CARBON PRINTING DURING THE SUMMER.

Making carbon prints during the summer time is often abandoned because of several difficulties that appear to be inseparable from hot weather. These difficulties can be overcome by care and a modification of some of the solutions, especially the bichromate sensitizer.

It will be necessary to have a block of ice at hand during the operation of sensitizing. The squeegeeing of the tissue after sensitizing must be done upon a stout glass plate that has been cooled off by rubbing over its surface a block of clean ice in all directions, so as to cool it thoroughly.

There is one important utensil that is a necessity for holding the sensitizing solution, especially for hot weather use. This is the tray itself. It should be made of wood, lined with zinc, and kept filled with ice water and a few pieces of ice for an hour before use. The ice water may then be poured off and the sensitizing solution poured in at once.

The use of such a tray is advantageous because the woodwork has been reduced to a very low temperature by the ice water, which aids in keeping down the temperature of the sensitizing solution during the operation of sensitizing.

The room in which the tissue is dried should be properly ventilated. By this is meant that there should be an inlet at the bottom of the room for fresh air and an outlet at the top to complete circulation.

A good sensitizing solution for summer use is made up as follows:

Bichromate of potash (C. P.).....	3 ounces.
Distilled water	100 ounces.
Glycerin	30 drops.
Salicylic acid (dissolved in hot water)	15 grains.
Carbonate of ammonia	60 grains.

When the above is dissolved and mixed it must be filtered through absorbent cotton, away from white light, because this sensitizer is acted upon by light, previous to using. The bottle should be allowed to stand in a wooden pail or stoneware vessel containing ice water for about half an hour.

The sensitizing should be performed under a yellow light; any source of light well screened with yellow paper will do.

Having poured the cooled sensitizing solution into the tray, proceed to immerse the carbon tissue therein face up. Carefully unroll it if it curls up, then just as soon as it lays flat turn it face down. Three minutes in the solution will be sufficient. Remove the tissue, allowing the excess of bichromate solution to drain back into the tray; lay the tissue face down upon the cooled glass plate, apply the squeegee quickly so as to remove all excess of liquid, then use a clean piece of rag or a clean cloth to wipe off *all* excess of sensitizing solution; lift the two top corners, insert two wooden photographic clips, raise the tissue from the plate and suspend in a darkened room or drying closet to dry. This will take place in the course of three or four hours. Just as soon as the tissue is dry it must be packed away in a large printing-frame, containing a stout sheet of glass with a black paper covering and kept under pressure until required for use.

Having the tissue sensitized ready for use, the next points to be attended to will be the printing and developing.

If the sensitizing operation has been carried out as described, there will be no melting or running of the pigmented surface of the tissue, and if kept under pressure away from contact with the air as much as possible the tissue will keep in good working condition from seven to fourteen days.

Any tendency to melting of the pigmented surface of the tissue during sensitizing and drying in hot weather is always conducive to reticulation, but if this part of the process has been satisfactorily performed there will not be much to fear in producing perfect prints by the other operations, except in the waxing material for the temporary support in the process of double transfer. The waxing compound found to be best suited during summer time is somewhat more diluted when required in colder weather. It is prepared as follows: Melt together in a clean iron ladle equal parts by weight of pure beeswax and clear yellow resin. When thoroughly incorporated by stirring with a clean stick, pour the mixture out upon a clean and well-cooled marble or iron slab. As soon as set, weigh out one hundred and twenty grains, break it up and place it in a sixteen or twenty ounce clean *dry* glass bottle, add thereto fourteen ounces of spirit of turpentine, cork the bottle tightly and place it into warm water, or allow to stand in a warm place, shake up occasionally until all is dissolved. Allow it to become cold, when it is ready for use. Always shake the bottle before using. This is to insure the beeswax being in solution. It is also advisable to filter this mixture through absorbent cotton, to separate any grit or dirt that may have been in the resin.

The above waxing solution contains enough resinous matter to give the necessary separating property to the temporary support for hot weather. It should be applied with a piece of canton cotton, well all over the surface of the support, allowed to stand for a minute or two, then carefully but lightly polished off with a clean piece of canton flannel and allowed to stand aside for an hour before use.

In developing, the printed tissue should first be soaked in water kept to 50° Fahr. before placing it upon its support, and the support itself should be kept in water of the same temperature. When proceeding with development, keep at hand a bottle of diluted muriatic acid — one ounce of C. P. muriatic acid in forty ounces of water. Add one ounce of this to the warm developing water, the prints will come up very brilliant and clear. This addition will also correct any alkalinity of the water, which is a frequent source of blistering of the carbon print in hot weather. When the print is developed and washed, fix it in a clean solution of white alum (never use chrome alum, because it hardens the print to an injurious extent and causes cracking) made of powdered alum four ounces, clean cold water one hundred. After fixing in the alum bath, wash well and dry.

When making the second transfer, be sure that the temperature of the water does not exceed 50° Fahr. in which the carbon print is placed to soak previous to the final transfer. Allow it to soak at this temperature for fifteen minutes before transfer. It will be found that no difficulty will arise from reticulation and the transferred print will be as perfect in every way as one made in the cooler months of the year.

A. J. JARMAN.

STRIPPING GELATIN NEGATIVES: ROY'S METHOD IN PRACTICE.

In a recent number of *Procédé* appear some practical notes on the method of stripping gelatin films from glass, worked out some years ago by Monsieur G. Roy. The practical directions are those of Monsieur Collemant, who sets forth the details of the process as worked by him for a very considerable time. M. Collemant says: " While a bath of alum does not completely insure the gelatin film against the action of moist heat, formalin renders the gelatin so insoluble that it may be plunged into boiling water with impunity, or can be placed in solutions such as hydrochloric acid, which in its less hardened state would rapidly bring about its disintegration. The negative having been finished off in the usual way, is placed in the following solution:

HARDENING BATH.

Water	10 ounces.
Formalin (commercial) ..	1 ounce.
Glycerin	5 drams.

This bath has no injurious action on the gelatin, and as brands of plates vary as regards the hardness of the gelatin film, it is well to allow a time ample for the softest, say ten minutes. At the conclusion of the operation the plate is removed and rinsed in a stream of water until all greasy appearance has vanished from the film. It is then set on one side to dry.

A large number of negatives may be hardened in this bath, the activity of which may be roughly judged by the pungency of its odor. The subsequent treatment to be applied to the negative may be postponed until convenient; the process described below can be carried out equally well even after the lapse of several months.

The first operation in this process is to cut the gelatin through the glass right round the edge at a distance of one-eighth of an inch or so from the edge. This is done to avoid the adherence of the film to the sharp edges of the glass, to overcome which adherence by hand would often risk the tearing of the film. The following solution is now prepared:

SODA SOLUTION.

Soda carbonate, cryst.	2 to 2½ ounces.
Water	10 ounces.

The *perfectly dry* negative is allowed to remain therein for several minutes. It is well to allow ample time for this operation also. For some plates, five minutes is ample: for others at least ten minutes should be given. A good general rule is, allow a quarter of an hour; and if this is observed, the films will strip with unfailing ease and regularity in the acid bath, to which the negative is transferred *without washing*.

The formula for the acid bath is:

ACID BATH.

Hydrochloric acid (strong)	1 ounce.
Water	20 ounces.

On immersion in this solution the plate becomes covered at once with bubbles of gas, and in a minute or two the film is released and floats in the liquid. Should it not do so of itself a careful touch with a soft brush will suffice to detach it. The stripped film can be completed in several ways. In any case it should be mounted on a glass slightly larger than the original negative, which glass should have been carefully talced beforehand. To do this, sprinkle a little talc (or French chalk) on the glass, distribute it with a tuft of cotton-wool without pressure, working the wool always from the center outward. When the surface has been covered in this way, a soft brush is passed over in all directions to remove the chalk. Every apparent trace of white particles should be removed; enough chalk will adhere to the plate even then. The glasses may be talced the day before they are wanted, but the talcing should never be done in one's drying-room if dust would be excluded.

The floating film is drawn to one side of the dish, gently taken between the thumb and first finger, and brought into a dish of clean water at the bottom of which a talced glass is lying, face up. The film will spread itself out in the water. The glass is taken hold of in both hands, and brought under the film. The latter is kept about in the middle of the glass by laying two fingers on its upper corners. Glass and film are then withdrawn together from the water, held vertically for a moment to allow superfluous water to run off, and laid in a horizontal position to dry.

It is at this stage that the first difficulty appears. It will be seen that a number of drops of water are imprisoned between the glass and the film. These must be removed, and this is best done by laying on the whole a piece of moleskin and giving a few strokes of the squeegee. Parchment paper should never be used for this purpose; it rucks up, and is liable to tear the film. The film is then set to dry. When completely desiccated, one edge can be raised with a penknife and the film stripped off. In this state it may be stored, but, as it is extremely thin and fragile, it is well to strengthen it before removing from the glass. A film of collodion, flowed over while the film is adherent to the glass, is one way of doing this, but a better plan is to double its thickness with a piece of white gelatin or *papier glacé* of the engravers.

Cut as many pieces of this gelatin as there are films to strip, and let them soak in the formalin and glycerin bath given above. Do not immerse all together, but place them into the bath at intervals of one minute or so, and keep moving constantly so that the pieces can not stick to one another.

Some makes of gelatin sheet can be cut slightly smaller than the films. By long soaking in a bath, i.e., thirty to forty minutes as an average, the gelatin swells and its area increases considerably; after drying in contact with the negative, the whole film is extremely thin.

To apply to the negative film, the swollen gelatin sheet is taken by one of its short sides — a corner in each hand — withdrawn from the formalin and glycerin bath and placed on the glass supporting the negative film. The lower edge of the sheet is placed in coincidence with the edge of the glass and the sheet lowered gently on to the negative, pushing before it the excess of water which it contains. The moleskin is laid over and the squeegee applied; all air-bubbles should disappear. A band of paper is then glued round the film, being attached both to it and the glass. By this device the two films are kept in place during drying, and do not part from the glass, or crinkle.

If space be left on the gelatin around the film a very convenient means is afforded of writing the title of the negative or other details.

ROY'S STRIPPING METHOD.

Before the Société Lorraine, recently, M. H. Drouillard further simplified the stripping method given in the *Photogram* last month, by putting the soda carbonate in the same solution as the formalin. The process is then quicker, and works equally well. M. Drouillard's hardening bath is:

Formalin ....60 to 90 minims.
Soda carbonate cryst.....20 grains.
Water to .... 1 ounce.

In which the plate or film remains for from five to eight minutes. The solution is then sponged from it, the film is left to dry and then immersed in hydrochloric acid, 45 minims; water, 1 ounce.

The Photogram.

THE Prosch Manufacturing Company, of New York, announces a new modification of its hand-camera shutter, the Diaplane I, which makes it a safety shutter, that is, one that may be set without exposing the plate or film. By an ingenious device it also does away with the four loose springs that have always been a necessity on the older Prosch shutters. The spring power to actuate the flies is now condensed into very small space, so that the shutter can be fitted to the smallest film cameras. This is now the ideal shutter for the kodak and other hand cameras, because it is the only one in existence that can be used with them to give them a speed of more than 1-40 to 1-60 of a second. No other diaphragm shutter ever works above this. But the Diaplane I goes to 1-200 of a second with ease, while the Diaplane special, for hand cameras, will go as high as 1-800, if desired. This makes the Diaplane the only shutter that will enable hand cameras, for either films or plates, to photograph athletic work, horse, yacht or bicycle races, flying birds, wild animals, etc. This work requires a speed of at least 1-300 of a second actual time. The progressive amateur should not lose time in finding out all about this new Prosch Safety shutter for hand cameras.

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THE NATIONAL CONVENTION.

If the maxim be true, "Happy is the country that hath no history," then the meeting of the National Association at Indianapolis should be considered one of the happiest that ever was, for everything went as pleasantly as could be desired. From first to last harmony prevailed. There were no acrimonious discussions, every vote taken was practically unanimous, and no one sprung a new idea startling enough to upset the equanimity of the most touchy.

The weather was cool, the amusements first-class and rational, the business routine was conducted expeditiously and without friction, many beautiful examples of photographic portraiture were on the walls, the crowd was large and eager to learn, so everything went as pleasantly as could be desired.

Two underlying currents of disappointment were, however, noticeable. One was that so many of the old-time standbys were conspicuous by their absence, especially those from the commercial metropolis, and the regular conventioners felt that they had been done out of part of what they had come for when they failed to have a chance to talk with Hollinger, Appleton, Core, MacDonald and such. The other was the lack of some popular bone of contention. Many looked back with regret to the days not so long ago when the pictorial movement was first started, when both in public and private the interest in the new departure was never allowed to wane. Now all are trying to travel along the same road, and there is nothing doing. I almost feel that President Reeves should appoint a special committee to ferret out something new and debatable for the next meeting.

Indianapolis is a fine town, and the people treated the visitors about right, so that altogether everybody was satisfied with his stay in the city.

F. DUNDAS TODD.

AN INTERESTING PHOTOGRAPHIC STORY.

From a little one-man affair to a large manufactory employing 1,200 people is a long journey and means a great expenditure of time and energy. Yet this is the story all too briefly outlined in a pamphlet just received from the Bausch & Lomb Optical Company, Rochester, New York, entitled "Souvenir Commemorating the Semi-Centennial Anniversary of the Association of Mr. J. J. Bausch and Mr. Henry Lomb and the founding of the Bausch & Lomb Optical Company," by L. B. Elliott. It is impossible to digest the story, for that has been done already by the author, but the central idea is summed up in a few words thus: The best is none too good for our customers, whether it pays us or not. It is interesting to note that the founders are still active in the affairs of the firm and that each is aided in the work by three sons, and all who know them hope that it will be a long time before the association of half a century shall be disrupted.

PICTORIAL COMPETITION No. 63.

Genre subjects, those that tell a story, are always popular with amateur photographers, and it has given me much pleasure in past years to note the rapid advance in the quality of those submitted in our competitions. This month there were half a dozen sent in, so close that, for my own satisfaction, I submitted them to no less than three groups of artists and art lovers before I was satisfied, and I am glad to say that all arranged the prints in the same order, so that there can be no hesitation about accepting the decision.

First prize — Otto Peetz, 347 Seventeenth street, Milwaukee, Wisconsin.

Second prize — Louis Fleckenstein, Faribault, Minnesota.

Third prize — Mrs. Pocahontas Jacquemin, Burlington Junction, Illinois.

Special mention.— James Thomson, A. H. Mowbrey and Mrs. Pearce.

PARTICULARS OF WINNING PICTURES.

First prize.— Taken in March on Cramer Crown plate, exposure eight seconds with stop No. 8. Printed on Eastman's sepia paper.

Second prize.— Taken July, at 5 P.M., clear sky, with rear combination of Goerz lens. Exposure two seconds. Printed on Kallitype paper.

Third prize. — Flashlight picture. Printed on Art Cyko.

CRITICISM OF WINNING PICTURES.

The first-prize picture is a very formal piece of composition and might very easily have been a failure. The principal skill has been displayed in the clever way in which the variety in spacing has been secured as is evidenced by the introduction of the plant to break up the white, the bag alongside of the window and the knitting and cards on the table. The lines on the left of the figure are rather stiff, but they have been subordinated by means of the shadow.

The second-prize picture technically is a specimen of good clean-cut photography, and artistically tells a story we all recognize at a glance. I think, while the lines of the composition are good, the comparative sizes of the figures are out of proportion, due to the use of a lens of a focus too short for the plate used, but my artist friends do not agree with me in this.

The third-prize picture deserves special notice on account of the charmingly natural attitude of the child, the fine tone quality all through, and the pleasing arrangement of spaces. It shows the great possibilities of flashlight.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 65 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

NEW editions of "First Step in Photography" and "Second Step in Photography" are now ready, and both are brought up to date. "First Step" is now in its seventieth thousand, while "Second Step" is in its twentieth thousand.

THE GUM-BICHROMATE PROCESS.

BY CHAS. MOSS.

It is a curious fact, and characteristic of that delightful freedom associated with the gum-bichromatic process, that the methods adopted by different workers vary so widely, and though each one may have his own formulæ and his own rules, they are his own, having been made and formed by him on the basis of a past experience of many failures.

Mrs. W. W. Pearce Waukegan, Ill.

It is, to a large extent, in this freedom, in this absence of arbitrary rules laid down by scientific lawmakers, that part of the charm of the process lies, and there are so many factors that have to be taken into consideration that an alteration in any of the conditions frequently leads to unexpected results. So, as his failures are the foundations of his success, slowly and by degrees the gum worker builds up his knowledge of the process, and in due course he is able by altering the quantities of the different constituents of his mixtures, and by varying the exposures to light, to keep the process under control.

After a long and frequently painful experience, I should strongly advise those of my readers who are lightly thinking of "starting gum" to pause and consider whether they have yet got the best their negatives can give them in the ordinary and more mechanical photographic processes. If, however, they are not satisfied, or if they feel they want more control over their picture than they can get in the ordinary way, then, by all means, get to gum at once, and I can promise them that, although, if their experience is like mine, they will have plenty of worry and not a few failures, photography will give them a new pleasure — a feeling of "power" and of control over their work to a far larger extent than they have ever had before. There is no flashing up of the picture, for good or for evil, as when we place a platinotype in the developing tank, or the utterly helpless sensation as when we pour the developer over a bromid enlargement with a muttered prayer that things may come well; but there is instead the slow building up of the picture, over which we can spend days, or, if we like, weeks, with the knowledge that any mistakes we make while developing can be rectified in subsequent printings, and when it is finished we shall feel that we have had, in some way, more to do with its production than with any of our prints by other processes.

It is not my purpose in this article to lay down any rules for the guidance of gum-bichromate workers, but to describe shortly some of the means I adopt in working. I do not claim that they are the only means, or the right means, but a description of them may be of interest to those who are "young in gum." First, then, as to the materials. These consist of paper, gum, sensitizing solution, pigment, brushes for coating, and the usual dishes. Almost any paper may be used, but there is a difficulty in coating a very smooth paper, and the beginner should start with papers of a moderately coarse surface. Whatman's drawing papers are suitable; Michallet paper has a beautiful surface to work on, but it has some very pronounced regular lines which are rather awkward. Allongé, another French paper, can be used on either side, and has a very suitable grain. Some papers are too porous, and absorb the pigment too readily, making it difficult to get pure lights; this tendency is, of course, sometimes useful, but if the worker wants his lights pure he can, by a preliminary sizing with a weak gelatin solution, overcome the natural tendency of the paper, and keep his gum and pigment on the surface.

The most important item in the gum worker's darkroom will be the badger-hair softener, and as it is the most important it is the most expensive. I am glad to say I have forgotten how much I paid for mine — it was a price I did not want to think about too long — but as it has lasted me a good many years, the price per print is no doubt infinitesimal. I work with a four-inch brush, but for small work a much smaller brush will answer the purpose equally well. The other brush required for coating is a small, soft, flat brush, about two inches wide; as long as it is soft and flat it does not matter much about the quality.

Now we come to the gum, and I will give one word of advice here. Always work with the same kind of gum. It is not necessary to buy the best, as long as it is gum arabic in lumps, not powdered; as a matter of fact, I use a cheap quality and get on better with it than with the better qualities, which in my hands behave in a variety of extraordinary ways, as if they resented being made use of by a photographer.

For pigments the beginner should commence with lampblack, of which he can get quite a large quantity for 5 cents from the nearest oil and colorman, and he can go in for other pigments when he likes, such as red ochre, sienna, umber, vandyke brown, etc.

A bottle of a ten per cent solution of bichromate of potash and a palette knife will complete the outfit, no special dishes being required.

Now, we will proceed to coat a piece of paper. In the first place we have to make our gum solution, and this we do by weighing out one ounce of gum arabic, putting it into a saucepan and pouring on to it two and one-half ounces of water (that is, the proportion of four of gum to ten of water). The gum is then dissolved by gentle heat, and when you are not in a hurry it is better to let the gum soak for some hours before applying the heat, but it does not matter much. When dissolved, the gum solution should be strained through fine muslin into a bottle, which must be afterward well corked if the solution is to be kept for a few days. It is ready for use, however, as soon as it is cold.

We will suppose we are going to coat

a piece of paper 30 by 20 inches. We pour into a measure half an ounce of the gum solution, and we weigh out ten grains of lampblack on to a stone slab or a piece of ground glass. I use an old piece of opal glass originally bought for squeegeeing carbon prints for double transfer. A small quantity of the gum solution, such as would cover a quarter, is poured from the measure on to the pigment powder, which is then ground down with the palette-knife into a paste. This operation will take two or three minutes, but should be continued until the gritty sound caused by the larger particles of the powder is no longer heard. The paste thus formed can then be taken off the glass with the knife and transferred to a small cup or a deep saucer, and the remainder of the gum solution poured on to it from the measure. Half an ounce of the ten per cent bichromate of potash solution is then added to the mixture, and the whole is stirred until thoroughly well mixed. This is best done with the small brush referred to above, and with which we are going to coat the paper.

The next operation, the coating of the paper, is the one which will require a little practice, but it is easier to carry out than to describe. Take a brushful of the mixture and brush it over the paper, which has previously been placed on a board and secured at each corner bv a drawing-pin, in even lines, working from side to side and then crossing from top to bottom. Do not be afraid of putting too much on at this stage (a piece of paper 30 by 20 inches will require nearly the whole of the mixture you have made). It will take longer to finish, but it will be easier to finish well. As soon as the paper is thoroughly covered, take the badger-hair softener, and by gentle, light strokes in all directions endeavor to distribute the coating fairly evenly all over the paper. After a few seconds of this work you will find the softener has taken up a quantity of the gum, and I prefer to wash the softener at the tap, thoroughly drying it afterward on a soft towel. On returning to the paper you will find it has expanded; take out the pins and straighten it, and then repeat the operation with the softener, gradually getting lighter and more gentle with your touches, and instead of drawing the brush across the paper use it rather as a stippler, holding it lightly as you would a pen, and using your wrist only in working it. At first the coating will look as if it never would become smooth and regular, but patience and a little practice will bring it to the proper condition.

Another method of coating is to soak the paper in the first instance in the bichromate solution, and after it is thoroughly dry coat with the mixture as described above, except that in this case plain water must be added to the gum mixture instead of bichromate. This preliminary sensitizing of the paper entails, of course, an extra operation. The advantages claimed for it are that the paper so treated prints more quickly, and the pigmented gum leaves the paper during development more readily. I work, however, in the way first described — it is less bother.

Printing is carried out in the usual way with an actinometer, and experience provides the best guide as to the depth of printing required. It is a common fault with gum workers to overprint; the process gives the best results when the printing is only just sufficient to prevent the gum from "running" on the print being hung up to dry after development. As a rule the exposure to light has been sufficient when, viewed by transmitted light, the print shows signs of darkening in the deepest shadows.

Development is conducted by placing the print face upward in the first instance in cold water, avoiding air bubbles. After a second or two the print should be taken out and carefully returned to the water face downward, where it is allowed to remain as long as necessary. After a few minutes it will be found, on holding the print up by one corner, that the coating, where it has been protected from the light, is beginning to run off, and the print should be allowed to remain in the water until the image is distinctly visible. There will probably be a thin veil of pigmented gum over the whole print, except, perhaps, in the very highest lights. The print should then be hung up to dry, for if the exposure has been approximately correct the surface will be too delicate to stand brush work, or even a spray of water, at this stage. After it has dried, however, it can be soaked again until the film is sufficiently softened to be worked with a brush; it can then be placed on a piece of glass or board and the brush brought into requisition.

This is the stage where the worker can work his own sweet will. Up to this point he has been to a great extent the slave; now he becomes, within limits, of course, the master; and with an assortment of brushes, a pad of cotton wool, a pointed stick, his finger, or any other implement that occurs to him as being suitable, he can so modify his print that its own negative certainly would not recognize it. But here also is the danger. This handwork must be guided by knowledge, or the result is of necessity nothing but a display of ignorance.

So much for the simple working of the process. I now propose to deal with certain modifications which I adopt in my own work, but in describing them I wish it to be distinctly understood that I do not give them as being necessary, but simply as the means which I have found give me the best results.

The greatest difficulty I have met with has been a certain deadness or muddiness in the print treated in the simple way described above; and although this has not been so apparent in those prints in the making of which pure black has been used, it has been very apparent when I have tried to get brown and sepia. There has been a great want of depth and transparency in the shadows, and I have to confess my inability, by any method of single printing, to overcome this defect.

It is possible, however, to build up the image by successive layers of pigment, until a range of tones from the deepest dark of the pigment used to the highest light of the pure white paper is obtained. Many of my prints in this way have five or six coatings, and the method of procedure is as follows:

Coat the paper exactly as I have already described, and when placing it in the printing-frame mark the back in some way, so that it can always be again placed in exactly the same position on the negative. Print as usual, and develop, being careful when using the brush or other tools not to rub away the surface of the paper, or you will find that the next coating of gum is likely to stain the paper where you have done so. When the print has been thoroughly dried it can be recoated and reprinted, and development is then carried on as before. If some of the pigment has been removed in error during the first development, the fault can be rectified at the second working, and by successive coatings and printings an enormous amount of power is given to the photographer, especially in respect of the control of values and the obliteration of undesirable details. The last two or three printings may be used simply to intensify shadows here and there, the remainder of the pigment being entirely removed.

When more than one printing is required, it is advisable to use a good paper; otherwise it will be found difficult to get a true register owing to shrinkage.

Even after successive printings it is very often advisable to "bring up" the shadows with a coat of varnish, and in my experience there is nothing so satisfactory as a coating of a solution of gum after the print has been mounted. It can be applied weak or strong, according to taste, and relieves the print from any dead appearance it may have.

I have not touched on many modifications of the process, such as varying the strength of the gum, the quantities of the pigment, the length of exposure, etc.; but the gum worker will find from experience, when he makes some mistakes in any of these directions, what a variety of results he will get, and it will be an easy step for him to profit from his errors, and use the knowledge he so gains for his own ends.

There is a golden rule which should be deeply impressed on the mind of every gum worker, and which should never, be the temptation ever so strong, be broken: *Accurately measure and weigh the ingredients of your mixtures.* Neglect this rule, and *guess* at the quantities of gum, or pigment, or bichromate, and your prints will at once begin to play tricks with you.

Some few months ago some articles by Mr. Foxlee were published in one of the photographic papers, giving particulars of a method of obtaining prints by the gum process, by which the paper was first sized with gelatin or starch, then sensitized and printed; after washing it was coated with a gum-pigment solution, and afterward developed. The process is based on the fact that one colloid substance, having been sensitized with bichromate and exposed to

Mrs. P. Jacquemin. Burlington Jct., Mo.

THIRD PRIZE.

light, has the property of transmitting the action of light to another colloid substance brought into contact with it.

I have had no opportunity of trying this method, but the only advantage I should suppose it to possess over the ordinary process is that the worker is enabled to watch the action of light on the print, and so exercise a greater control while printing. On the other hand, the process seems to be a more tedious one, and the number of operations to be carried out would, in my view, prevent its adoption, unless it possessed other advantages over the old method than that mentioned.—*The Amateur Photographer.*

PROFILE or silhouette portraits are easy enough to produce with a camera. You merely have to pin up a calico sheet or a sheet of white paper against a flat surface, seat your patient in front of this and give a short exposure. Such pictures are occasionally taken as curiosities, but we think that any one who would take the trouble to secure an album of such portraits of his friends could meet with some very interesting experience.

HYDROQUINONE and Iodin is the latest developer! M. Carteron, in *Ombres et Lumiere,* says: "We make a solution of water eight ounces, potassium iodid seventy-five grains, iodin scales sixteen grains. For development we add three drops of this solution to about four ounces of hydroquinone developer. The film or plate is rapidly developed, the image gaining intensity very rapidly; the time required is about five times less than would be necessary were no iodin used. The blacks are very fine, and the contrast given is vigorous, but not undesirably hard. With bromid paper we find the whites keep very pure, and by varying the quantity of iodin solution many different degrees of contrast are procurable. The only care to be taken in developing paper is that the developer should be pretty dilute."—*Photography.*

GELATIN MOUNTING PASTE.

A good gelatin mountant for pasting photographs into an album with little tendency to cockle may be made as follows:

Gelatin	2 ounces
Water	8 ounces
Alcohol	3 ounces
Glycerin	¼ ounce

Soak the gelatin in the water till perfectly soft, and dissolve by standing the vessel in hot water. Add the spirit gradually, with constant stirring, and then add the glycerin. It is used while still warm enough to be fluid, and a convenient way is to warm a plate of ground glass by placing it in hot water, drain, and brush it over with the mountant. On this lay the print, face up, pressing it into contact with a piece of paper, and, raising one corner with the point of a knife, lift it gently and transfer to the mount, rubbing down with a roller squeegee. The mountant will keep indefinitely, and needs only to be liquefied by placing the bottle or jar in a vessel of hot water. M. ROSE.

PHOTOGRAPHIC MAKESHIFTS.

There are a number of well-known photographic makeshifts, such as utilizing the yellow or red covers of certain journals as non-actinic mediums on occasion, and the old dodge of using an unexposed plate or film as a focusing screen when the orthodox article gets smashed or is forgotten. Every now and then, however, we hear of a new "wrinkle." One of the latest has to do with developing roll film. An enameled pie-dish is taken, in the sides of which four holes are punched near the top edge and about one inch from each end, both pairs of holes being opposite to each other. Four metal skewers are now passed one through each hole, and these serve to suspend a couple of wooden reels, such as form the center of film spools. These reels serve as spindles upon which a strip of film can be developed by simply drawing it to and fro through the developer in the pie-dish under the wooden reels.

SIMPLEX.

A HOME-GROWN TRIPOD.

For the benefit of the many devotees at photographic shrines, who have more zeal and enthusiasm than dollars to spend on this fascinating art, let me here show how I made a $3 tripod at a cash outlay of 45 cents. Many, like the writer, would prefer to make some of the many accessories to photography that they *can* make, and put the dollars thus saved into a fine lens they *can not* make, but greatly desire.

At the outset I must confess to some skill in woodcraft and have the few necessary tools at hand, so I bought the few bits of brass, screws, etc., and made

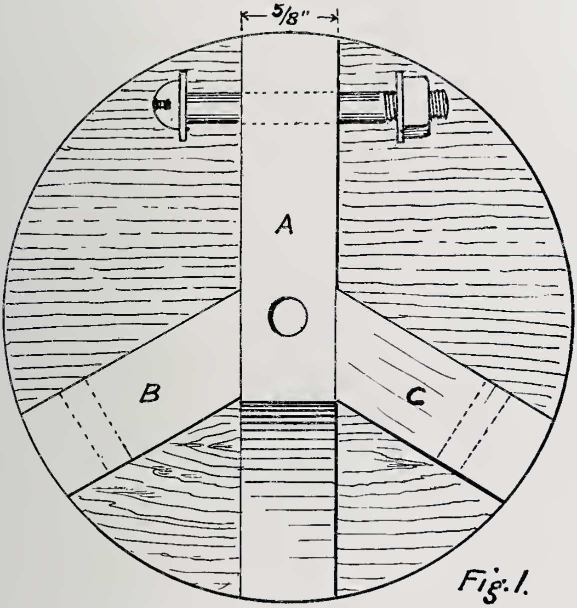


Fig. 1.

BOTTOM VIEW OF TRIPOD HEAD

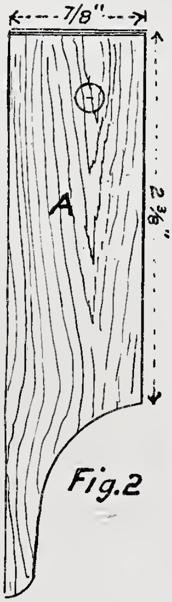
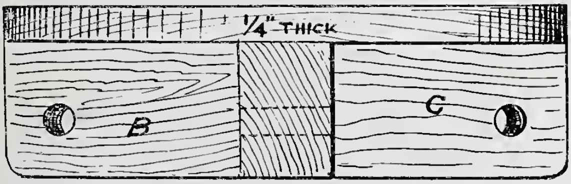


Fig. 2



SIDE VIEW OF TRIPOD HEAD Fig. 3

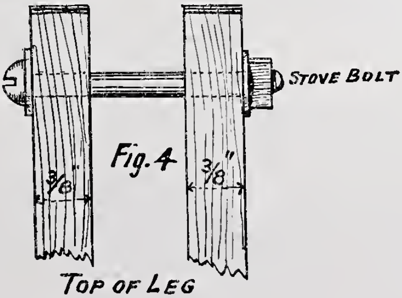


Fig. 4

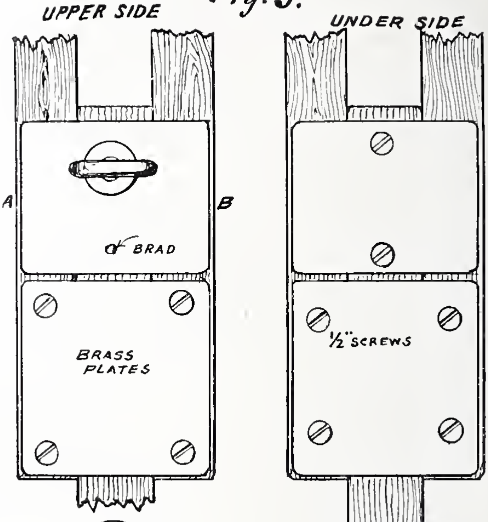
TOP OF LEG

the rest. But to those who can not themselves do the work (and to the ladies this will apply) get that carpenter brother, cousin or friend to lend his skill while you do the "bossing."

First, buy a tripod-screw of your local stock dealer, price 25 cents. Get at the village hardware store the following: Three round-head stove bolts, 3-16 inch by 1½ inches; three screw-eyes, about No. 9; one and one-half dozen ½ inch brass screws; ten copper rivet-burrs, 3-16 inch hole; a piece of brass plate, 1-32 by 6 by 8 inches. These items should not cost over 25 cents or 30 cents. Find about your home a piece of hard wood ⅞ inch thick, 26 inches long and 6 or 8 inches wide — ash preferred, but oak, cherry or maple will do. Saw out nine pieces 26 inches long, so that when nicely planed on four sides they will be of sizes as noted in sketches. Cut out a circle 3¾ inches diameter of hard wood ¼ inch thick. Glue, under pressure, the lugs A, B and C, Fig. 1, as shown. From the top side, when glue is dry, drive six screws ¾ inch long; then bore three 3-16 inch holes for the legs, as shown.

Cut your brass with a tinner's "snips" to the sizes as shown and drill the holes for screws. You are now ready to fasten the legs together, precisely as shown in drawings. The lower

Fig. 5.



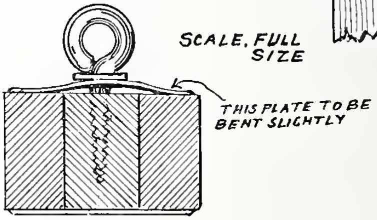


Fig. 6.

SECTION AT "A.B"

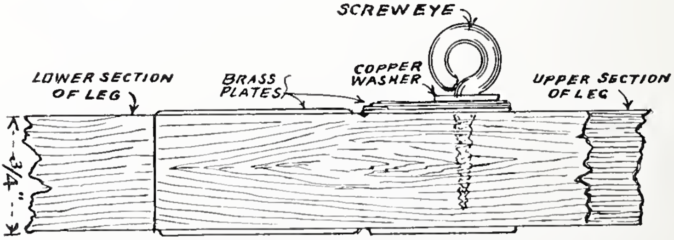
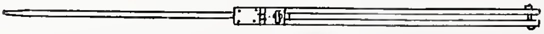


Fig. 7.

SIDE VIEW OF LEG JOINT

FIG. 8.



LEG EXTENDED

leg should slightly taper from a point four inches from the top to the bottom. In making a hole for the screw-eye to work in, take care that it shall be no larger than will admit the screw-eye without splitting the leg. A little oil or grease will make it work easily under the thumb and finger. After the legs are finally attached to the tripod-head, turn up the nuts firmly, and, with a small hammer, batter the threads outside the nut a little which will prevent the nut from backing up.

Lastly, sandpaper the whole with 00 sandpaper and apply a coat of boiled linseed oil on a rag. Let dry, repeat sandpaper, and apply second coat of oil, and rub dry with cloth. If you have been painstaking and careful you will have a tripod that, like the author's, will stand under a 5 by 7 Poco, staunch and stiff, and will stand more grief than many of the wobbly, many-jointed "featherweights" now on the market. Should my description and drawings be insufficient write me for further particulars. They will be given freely.

L. C. W.

SOME HOME-MADE CONTRIVANCES.

When the novitiate turns his steps along the highway toward photographic success he is confronted with many "do's and don'ts" which ofttimes seem most bewildering.

In the text-books we are advised to dust carefully each plate before placing in the holder, with a camel's-hair brush provided for the purpose. Personally, I early discarded this otherwise useful article, using instead a slightly dampened cloth for cleaning out the holders; and for plates, a little article much resembling a blackboard eraser, covered with silk velvet. It seems to catch and hold those little pin-head producers at one sweep, instead of setting them agoing to again settle where least desired.

A further avoidance of specks and dirt is in the use of grooved fixing trays, provided by the stock-houses at a cost of $2.50. They are admirable. One may credit cash, however, with about $2.40, if he so desires, by converting a few pieces of pine into a diminutive pig-trough, much flattened at the sides. Pitch the seams with a combination of resin and beeswax, and fix the plates face downward, and the film is never damaged by a careless finger-nail.

Again, if one desires to do a bit of copying, and does not possess an extension bellows, he may draw on the carpenter's waste for four pine pieces, eight or ten inches in length, which will form a box the exact size of the front board; blacken on the inside, make a narrow slot at one end that it may attach tightly to the camera, at the other end fit in the front board, and a non-contractable copying outfit is at your disposal.

I saw, one day, a cloud enthusiast, so at least I judged him, for the fantastic fleeting clouds were the object at which his lens was pointed, and in contention was a fitful eddying wind and a focusing cloth which flapped about most provokingly. I likewise had previously been thus annoyed, so I tendered him the following advice: Procure a generous piece of brown canton flannel, sew on to it a smaller one which, by means of hook and eye, will fasten securely about the box. Then, if each corner of the larger piece is shotted it will effectively overcome the "flap." This may be a chestnut to many workers in the field, but it was new at least to one.

Would we achieve success in the photographic art, we are advised to study the work of the masters, of those at least who might most worthily be so considered; and this is well, but I sometimes think that one too, with advantage, may study the failures; and I think we will all agree that this same highway which leadeth toward success is strewn with many of them.

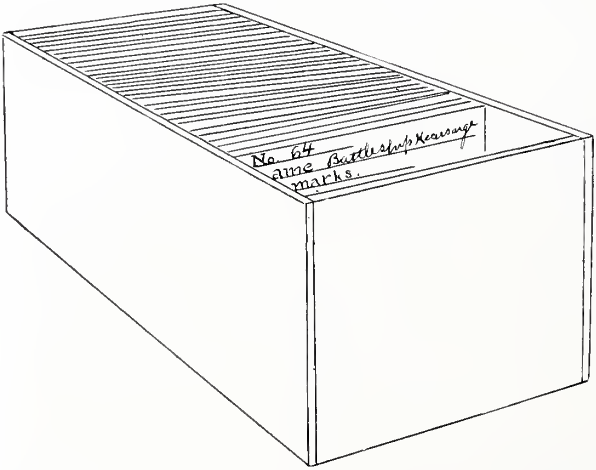
W. E. Dickinson.

Through an oversight we omitted to state that the excellent article in June issue, by C. W. Somerville, on "The Conversion of the Silver Image of a Bromid Print into Platinum," was read before the Royal Photographic Society of Great Britain, London, England, and appeared in the journal of the society.

THE SIMPLEST WAY TO INDEX NEGATIVES.

For the past year I have been watching the various schemes put forth in the pages of THE PHOTO-BEACON for indexing and preserving negatives, and I feel bold to assert that this plan is the simplest yet. The negatives almost index themselves.

All the materials needed are envelopes — negative preservers and a wooden box. I will give measurements for 4 by 5 negatives and other sizes can readily be estimated. My envelopes are 4⅜ by 5½, and the width and height of my box (inside measurement) just ⅛ of an inch larger, making it 4½ inches high by 5⅝ inches wide. The box is 9½ inches long and will hold one hundred negatives. The length is optional, but a longer box would be heavy to handle when full. These boxes need not be in the least elaborate. Mine are made out of horseshoe-nail boxes, and do not even have covers, though they could easily be added, if desired.



Now, how shall the box be used? There are two ways; one for the lazy man and one for the methodical man. Be careful to get negative preservers having the title lines at the top and running the long way of the envelope. Then, all that the man who "can't stop" has to do is to slip his negatives into the envelopes, write the title of each, on the black line, add what data he chooses, and then *stand* them up in the box, as if they were the cards of a card index. When he wants to find a negative, he runs his finger over the top of them, glancing at the titles just as if he were using a card index, and is surprised to find how quickly he can do it.

And now what does the methodical man do? In addition to the title, he writes a number on each envelope, stands them in the box in regular order, and then makes a catalogue of the titles and numbers in a notebook. When he wants to find a negative, he hunts up its number in the catalogue before looking for it in the box.

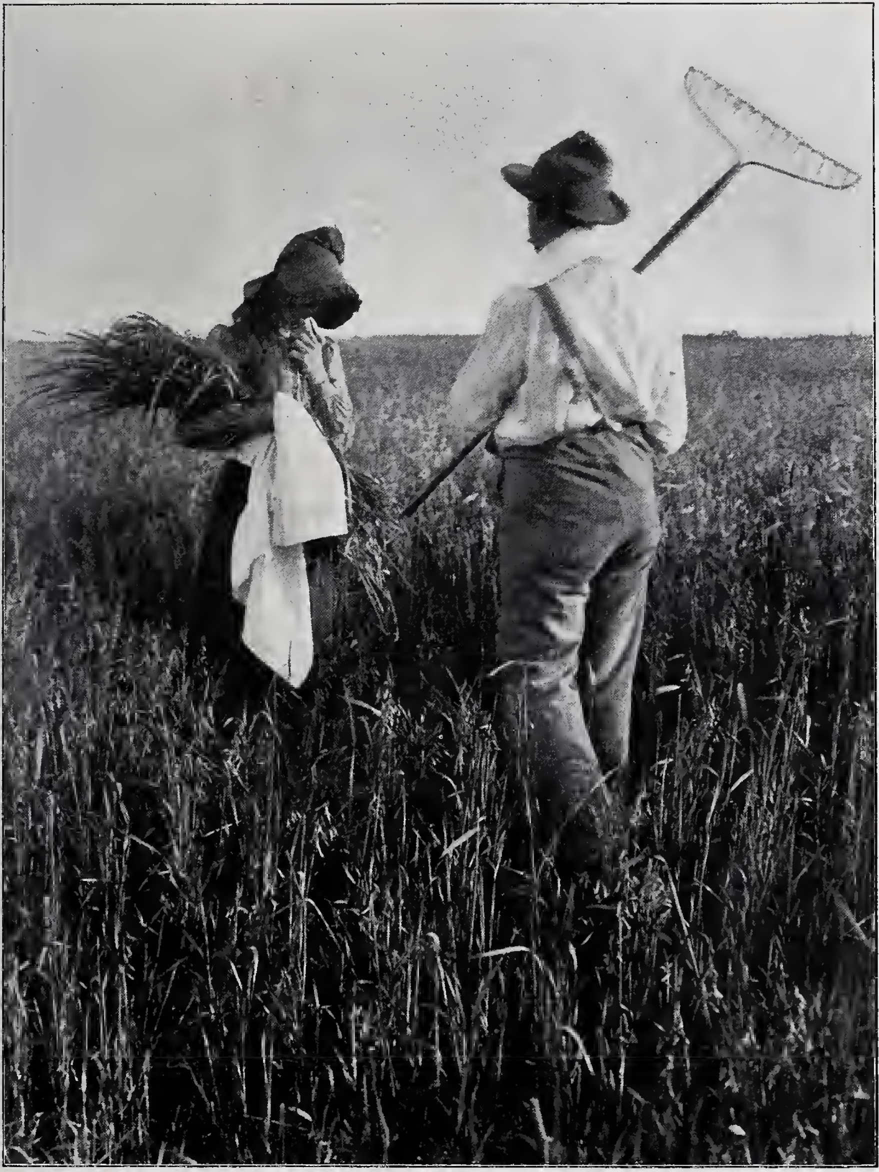
In his catalogue he does not mix up negatives of different sizes, but devotes a special portion of his notebook to each size, since he has different sized boxes for each.

As for myself, I combine the two methods, and am both lazy and methodical by turns. I often have a box partly full of negatives that have only the titles written on the envelopes and are waiting for me to get ready to number and catalogue them.

If there are only a few negatives in the box and they insist upon tumbling down, instead of standing up properly, it is very easy to tie up a compact bundle of worthless plates and lay it flat in the bottom of the box, to serve as a buffer to keep the unruly negatives from slipping down.

I think I take the most comfort out of my boxes when printing-day comes around. I carry them to the place where I mean to print, whether in doors or out, select negatives from them as fast as I need them to fill the printing-frames, and when I am done with each one, I slip it into its envelope and put it back in the box. My negatives are never scratched and never mislaid, while, in case of fire, they could be removed at a moment's notice. I think the latter consideration, combined with the simplicity of the plan, would appeal especially to professionals, since their negatives are usually so scattered about that a fire means sure destruction. These boxes are also useful in case one has to pack their negatives for moving. Fill the boxes full, stuffing paper in all empty spaces, fasten a cover on securely and move them as far as you like.

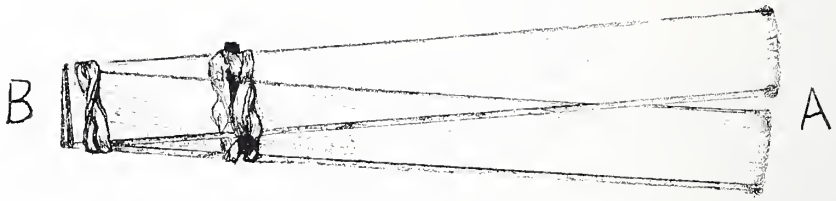
NELLIE W. CRIE.



Louis Fleckenstein. SECOND PRIZE. Faribault, Minn.

A HELP IN PRINTING.

It became an imperative question with me how I might manipulate the so-called "after-supper" papers without a too frequent washing of the hands. Hitherto I had washed my hands after each picture reached the fixing tray; forced to adopt such a rule because of the almost sure presence of spots on some at least of every set of pictures. Now, if one is doing a dozen or more pictures, and if after each washing the hands must be thoroughly dried before touching the paper again to put more in the printing-frame, considerable time is wasted. Moreover, Nature herself rebelled and hands already chapped by the cold weather *must* be relieved. I imagined that nippers made of glass would serve, so called in the help of the "Ingenious One" and now have exactly what I need. Simple and very cheap. I can now do a dozen or more pictures without once washing my hands and with a gain of time. These glass nippers consist simply of two strips of glass 5 by ⅝ inches. They may be cut from a 4 by 5 negative that has been thoroughly washed off, the instrument for cutting being an ordinary 10-cent glass cutter. The edges of these strips of glass have been filed to reduce the unpleasant sharpness and the ends at A have been held in a very hot flame (that of a gasolene torch) until they have rounded a bit and are quite smooth, so that there is no danger of tearing the paper. The two pieces are placed flat together, then a little more than an inch from B a small piece of wood, a little larger than a piece of a match, is placed between and a rubber band is twisted twice around. Then very near the end B is another band twisted around twice in the same way, but without the wood. That is all. Very easily put together and as easily taken apart and washed. Now, if I am using velox paper, I have a pair of these nippers in a cup beside my first dish of water; another pair beside my developing tray and a third beside the hypo tray. All in cups, so that no chemical can work up on to the hands as might be the case should I lay them down. Having placed the print in the first dish of water, I take it gently by the corner with the nippers beside that dish and drop it gently into the developing tray, returning the nippers at once to their own cup beside the first dish of water, and so on. Of course great care must be taken lest the nippers touch the tray or its contents when dropping the paper into the next dish. If they should, then they must be washed or another pair substituted. It is perfectly safe to move prints about in the hypo by means of the nippers, as their smooth ends will not injure any paper.



Dry hands from first to last and no disappointing spots when daylight enables one to closely examine the prints.

E. D. G.

THE Reflex Camera Company, of Yonkers, New York, has enlarged its facilities within the last month and announces that it is now in a position to fill orders promptly. This enlargement has been necessitated by the overwhelming rush of orders last spring. The long-focus models of this company are especially appreciated by photographers of birds and other animals, yachts and races.

Any of our readers who are interested can procure a catalogue by inquiring of Reflex Camera Company, Yonkers, New York.

PICTORIAL PHOTOGRAPHY AT THE LOUISIANA EXPOSITION.

In comparison with all other expositions the World's Fair at St. Louis will be of paramount interest to the photographer, both professional and amateur. Gradually photography has been taking strides forward, until now it is recognized not only as a most important mechanical process, but has entered the realm of Art as well. So it has been determined that while the main exhibit of photographs at the Universal Exposition of 1904 will be in the Liberal Arts Department, yet, under certain rules and regulations, formulated by John A. Ockerson, chief of the department, selected pictures will be given a place in the Art building, under the rules of the Art Department.

After careful consideration of the problems involved, a thorough canvass of the situation and fully testing the sentiment of the members of photographic associations, societies and clubs, the following conclusions have been reached by Chief Ockerson in regard to the collection and display of photographs at the exposition, and it is hoped that the photographic fraternity will be more than generous in their coöperation to the end that the highest examples of their work will make the photographic section conspicuous for its excellence.

First. Each society of photographers is requested to select, in such manner as may be deemed best, from photographs offered by its members for exhibit, such pictures as they consider most worthy of a place in a great Universal Exposition. The pictures so selected, together with such as may be offered by individuals not members of a photographic society, will be submitted to a committee of review and selection.

Second. The following named camera clubs and photographic societies are requested to name one person each as a member of a Committee of Review and Selection, the members so named to be certified by the officers of the respective clubs to the Chief of the Department of Liberal Arts not later than November 1, 1903. The societies to be represented are: the Photographic Association of America; the Photo Secession of New York; the Photographic Society of Philadelphia; the Society of Amateur Photographers of Chicago; the Boston Camera Club; the Camera Club of New York City, and the California Camera Club.

Third. The Committee of Review shall, under the direction of the Chief of the Liberal Arts Department, carefully examine each photograph offered, dividing them into three grades or classes and one rejected class, the grade to be marked on each picture according to merit.

Fourth. Grade one, or the pictures deemed to be of the highest merit, shall be certified to the Chief of the Department of Liberal Arts, who shall in turn certify them to the Chief of the Department of Art, and under his direction said pictures shall be examined by the National Jury of Selection of the said Department of Art.

Fifth. The pictures so examined by the National Jury of Selection, which shall be by them considered worthy of such distinction, shall be hung in the Art building under the rules of the Art Department.

Sixth. Pictures of the first grade, not admitted to the Art Palace under the above conditions, may be hung in the Photographic Section of the Liberal Arts Palace. In addition to these, there may also be hung pictures of the second grade and as many of the third grade as the space available will permit.

Seventh. Suitable screen walls will be constructed in the Liberal Arts Palace on which pictures may be hung. The special adornment of space allotted to an exhibit must be done by and at the expense of the respective exhibitors in each case.

Eighth. The expense of special rquirements for lighting, if such be found necessary, will be prorated among the exhibitors at the established rates.

Ninth. Each picture offered as an exhibit must be the individual work of the exhibitor and should be accompanied by the title of picture, the name and address of the exhibitor, all but the title being in a sealed envelope, so that authorship will remain unknown until after the pictures have been graded by the committee. The outside of envelope to bear a design or name which shall also be entered on the back of each picture to identify ownership.

Tenth. All pictures offered must be mounted, framed and matted, and all expenses of transportation must be fully prepaid by the exhibitor, and must be shipped at owner's risk so as to reach St. Louis not earlier than January 1, and not later than January 30, 1904. Shipping labels will be sent upon application.

JOHN A. OCKERSON,
Chief, Department of Liberal Arts.

MODIFIED KALLITYPE.

Some time ago I invested five good dollars in photographic chemicals and started in to try for myself the various printing processes I had read about. In short, to prepare my own paper. I can say with truth that I have had the worth of my money in pleasure and knowledge gained through my investment, and have learned that there are other enjoyable features connected with photography outside of the taking of the pictures.

Among other printing methods I tried Kallitype, from the description given of the process in the *Photo Miniature*. To those who have tried it, it will be no surprise when I say that it has one serious fault that seems difficult of elimination, and that is the bronzing of the shadows when using a negative of more than ordinary contrast. All the writers seem to ignore this objection to the process, although it precludes the use of the process for many purposes, and often makes it necessary to throw away an otherwise satisfactory print on account of its presence.

I began to experiment with varying success in overcoming this trouble and some times I succeeded, and then, again, just when most confident, mixing up a new lot of sensitizer I would for some reason fail. Not only fail, but get entirely different colors with the same manipulation from what I had previously obtained. I have, however, succeeded more than once in getting beautiful results, and in the hope that others may profit by my experience I have felt constrained to give my formula for others to tinker with if they see fit. My sensitizer is compounded as below:

Silver nitrate	30 grains
Ferric oxalate	75 grains
Citrate of iron and ammonia	10 grains
Chlorid of copper	9 grains
Distilled water	1 ounce

Dissolve the ferric oxalate in warm water and let stand over night. Then add the other ingredients, and when all are dissolved filter through absorbent cotton. Coat the paper evenly with this, and when thoroughly dry print until deepest shadows are well defined. The image will be of a salmon color, differing from regular Kallitype somewhat in this respect. For developer, mix Rochelle salts, twenty-five grains to the ounce of water, and in a separate bottle, borax, forty-five grains to the ounce of water; by combining the two in varying proportions different colors will be obtained. The more borax the darker the tone. Mix of bichromate of potassium four grains in one ounce of water and of this add from four to twenty drops to each ounce of developer. Some negatives will require none. Always add enough to insure pure whites and vigorous prints. Leave in developer from fifteen to thirty minutes, then wash and clear for ten minutes in the following bath:

Stronger ammonia	1 dram
Water	16 ounces

Wash further for thirty minutes and dry as usual. JAMES THOMSON.

GLYCERIN is the finest medium to make water-color take to the surface of photographs. A little should be rubbed over the photograph with a pad of flannel, and all visible traces of it removed. Either anilin or transparent water-colors will flow freely on this medium which is much better than oxgall.

A COMBINED FIXING AND WASHING BOX AND DRYING RACK.

The amateur photographer who possesses an ordinary amount of mechanical ability, a small stock of patience, and a desire to "make things" will find both pleasure and profit in constructing this handy article, as an adjunct to his photographic outfit.

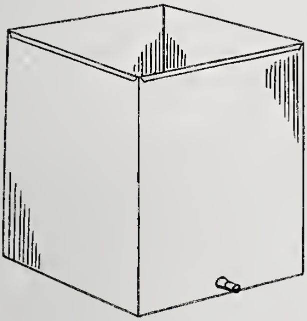


fig 1.

Only a few tools are needed, a pair of pliers, file, punch and soldering iron, though the latter may be dispensed with if one prefers to have a tinner do the small amount of soldering necessary. For a 4 by 5 plate you will need a tin box, about 6½ inches high and 5 inches square — an empty calcined magnesia can (Keasby & Mattison) which any druggist will give you, or save for you — will be found quite suitable. I made my box from one of these cans, by cutting off 2 inches from the top and then cutting down each corner about ¼ inch, bending over about that much on the outside — this makes a smooth edge, and strengthens the box. Punch a round hole, about quarter of an inch in diameter, in the middle of one side, about ½ inch from the bottom, and over this solder a short piece of tin or brass tubing — I found an old gas-burner with the tip removed answered the purpose admirably. This done, the box should resemble Fig. 1, and the next step will be to make the rack. For the latter, a few strips of tin and several feet of No. 10 coppered-iron wire will be needed. For the base, cut a strip of tin 3 inches wide and 5½ inches long, and punch a small hole, same diameter as the wire, in the exact center, then two larger holes on the same line and about ¾ of an inch apart (Fig. 2). At each end turn down at right angles to the base ½ inch, so as to raise the base that distance from bottom of box. Take a piece of wire about 18 inches long and bend one end as shown in Fig. 2, and pass through the center hole in base from the under side, and solder firmly. Now, bend the other end in the form of a ring about 6 inches from top of base; cut two pieces of wire about 4¾ inches long and solder to upper side of base about ¼ of an inch from the edges and parallel to them. This will raise the plates above the base and facilitate drying. Now, take two pieces of wire and bend as in Fig. 2, so that the sides of the square will be 5 inches high and 4⅛ inches wide, turn the base upside down and solder these frames, one at each end and at right angles to the base. You will now need two strips of corrugated tin, about 1½ inches wide and

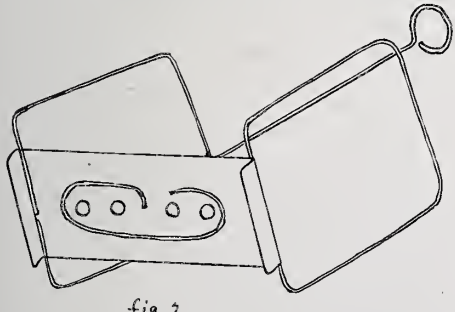


fig 2

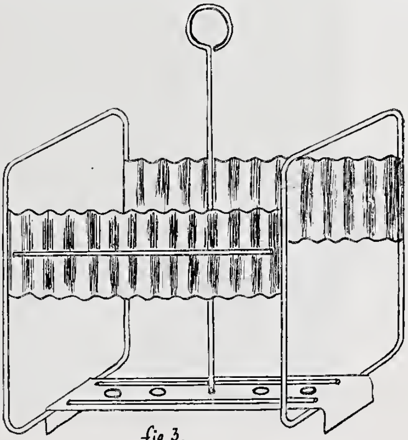


fig 3.

4½ inches long — you can make these with a pair of round pliers, or have a tinner make them for you, at a trifling expense. Solder these strips on the inside of wire frames, about 1 inch from the top, then cut two pieces of wire 4 inches long and solder one on each piece of corrugated tin *on the outside.* This will strengthen them and make the rack rigid. So much for the mechanical work. Your next step will be to give both rack and box two coats of white lead and finish with one or two coats of black asphaltum varnish.

Now, as to using, place a good cork or rubber stopper in the tube of box, place the rack inside and fill with hypo-solution, after fixing (your box will hold any number from one to a dozen) draw off the hypo-solution through the tube into a wide-mouthed bottle, place the box in sink and attach a piece of rubber tubing to the vent and connect with faucet. The water flows in at the bottom and overflows at top — one-half hour's washing will be found sufficient. Lift out rack containing plates and set away to dry. I trust this description is plain enough to allow any amateur to construct this useful apparatus. Its advantages are many and will well repay any one for taking the trouble to try it by practical experience.

H. L. HURXTHAL.

THE POSE.

BY FRANK M. SUTCLIFFE.

"The pose" is generally applied to the human figure, not to horses, dogs, cats, etc.; yet when other animals than man are drawn or photographed they are shown in such positions as bring out their best "points" to most advantage. It is so with the portraiture of mankind, only we do not speak of "points."

The expression "posing" has an ugly sound, for it too often means that either the subject to be photographed is assuming a position unnatural to "it," or the photographer is placing the subject in some position "it" would not take of its own accord.

Many photographs bear on their face evidence of artificial posing, and prove either that the photographer was not sufficiently master of his art to be able to conceal the art he employed, or that the sitter was not sufficiently at his ease, or else that the photographer had mistaken his vocation or had not been properly trained in that vocation.

When one comes to think of it, there must be very few photographers who have had a proper training. There are — it is needless to write it — but two training grounds for those who would develop their skill in posing — the present and the past. It all depends on the student which course of study should be taken first. If the learner has been bountifully endowed at his birth, then he may take the present first, and take up the past at his leisure; but if he is like most of us, then he had better begin with the past. If possible, in Assyria or Egypt. If these are too far off, at the British Museum.

I have often wondered why the photographers in Bloomsbury are not the foremost in the world, for they have opportunities which few have; for there at the Museum they may see how the artists in the past have thought fit to pose their sitters. Why, a Bloomsbury photographer, without an atom of invention in himself, should be able to copy a fresh pose almost every day of his life from the examples given on the Etruscan vases alone.

One reason why the poses one sees in photographs are so artificial is because photographers look for inspiration to photographs instead of sculpture and painting and nature. The student who is wise enough to go back to the past will soon find out what an important part dress plays in the pose; it did so in the time of ancient Greece, it does so to-day. The works of Holbein and J. van Beers differ principally because of the difference in the quantity of clothing their respective sitters wore.

The painter has the advantage over the photographer in that he knows who his sitters are; the latter has to find out. He may mistake a duchess for an actress, or vice versa. One has only to look at the illustrated weeklies and monthlies to see how often this occurs.

Sometimes the duchess is taken with her feet on the fender, instead of sitting on a balcony holding an arum lily.

Those who have studied old paintings, whether on pot, paper or wood, will have noticed that in all these old portraits there is a dignity, a reserve, which modern photographs often fail to show. There is, in fact, less posing about them. The sitters appear at their ease, as if they were unconscious of being looked at; even when clothed in garments studded with precious stones, garments which must have cost many hundreds of pounds, they sit or stand with their hands together in the simplest positions imaginable.

It is a mistake for the painter or the photographer to put too much of himself into the portraits he makes; in a portrait we do not wish to be constantly reminded of the workman. It is, of course, difficult for the artist or the photographer to decide quickly on the sitter's most characteristic, or even one of his many natural, positions, without a much longer acquaintance with his sitter than is usually possible. It is better to let the sitter pose himself rather than ask him to take any position which the artist may have in his mind. Perhaps the sitter will at first pose consciously, but in all probability he will soon tire of this and become natural. If the painter sees any imperfections, such as creases and crooked neckties, his brush will make all straight; the photographer has to be more particular, and sometimes has to suggest that a coat which is too tight might with advantage be unbuttoned. The photographer, to be successful at portraiture, must have an eye which takes in every little detail at a glance.

James Thomson. Roxbury, Boston, Mass.

THE STORY OF THE CROSS.

The positions the body takes depend greatly on health and strength, or the want of these qualities. The backbone in the strong remains straight and the shoulders square; to place a healthy man in languishing lackadaisical attitude is absurd. If the figure seems to be all angles and squares, never mind; it will appear all the stronger.

In those positions where the sitter is

seated, the shape of the chair has much to do with the success of the pose. In a full-length figure in profile, unless the chair legs are well bent outward, the figure will sometimes appear to be falling backward. The conventional photographer gets over this difficulty by placing an imitation begonia or a palm behind the chair on the ground; this only makes confusion worse confounded.

Some people find it difficult to do "nothing" gracefully. If the sitter is a woman, and the photographer wishes to make a pleasing picture, and she is unable to appear natural when at rest, then it may be wisdom to place some light employment in her hands; but the action, the resemblance of work, should never be great. As Mr. Hewett says, "It is a mistake to freeze a moment of time into an eternity of waiting," or words to that effect.

It will be noticed that well-proportioned people appear to take the most natural, graceful positions; those whose legs and arms do not come up to the recognized standard find a difficulty in appearing at their ease. The student who wishes to learn when his sitters *are* at their ease and when they are not, could not do better than study the drawings of the late George du Maurier.

Photographers too often forget that the position anyone takes is unconsciously dictated to the body by the mind. Every position should, therefore, show to some extent the working of that mind. When the hand is on a line with the arm, and when it drops helplessly from it, show two different moods — the alert and the quiescent. Why photographic portraits so often look like stuffed figures is because the limbs are not placed as if dominated by one idea. One arm will express action, the other one sleep; the neck will express pride; while the knees of the same body will express humility.

The photographer, therefore, should look for those positions which will call for least comment — positions where the sitter seems at rest. He will often be called upon to hide or modify defects, or at least shortcomings from the ideal. By judicious lighting, or rather shading, of any feature of the body which appears unusual, he will be able to please his sitters. If at the same time he is able to make a pleasing combination of lines, and preserve a balance of light and shade, then he will have proved his claim to the title of artificer, which the dictionary says is "a skilful workman in some art."—*The Amateur Photographer.*

Your Photo-Beacon would do good missionary work by educating amateurs, but also photographic authors, to be precise in their statements. I am now a subscriber in my third year and never fail to get the twelve monthly installments solidly bound at the end of the year. The contents of your periodical are of such lasting value and somehow always fresh that no matter how old back numbers are, they do not get stale. Those of your subscribers who do not preserve each year well bound miss a good deal, as a friend of mine, also a subscriber, found out a few days ago when he picked up my two volumes, 1900 and 1901, and after an hour exclaimed: "I never knew there was so much in it. Getting a small dose once a month, I did not realize how much solid information and wealth of illustration is summed up in the course of a year; from now on my volumes will be bound."

Yours respectfully,
George H. Kretz.

Frilling is often caused by the difference in the temperature of the developer and the fixing bath. Hypo, in common with many other chemicals, undergoes a lowering of temperature while dissolving. To remedy this, make up a stock solution of hypo as follows: Place two pounds of hypo in a muslin bag, and suspend it inside a wide-mouthed bottle containing thirty-two ounces of water. It will soon dissolve if this method be adopted. For fixing plates take three ounces of this stock solution and add four ounces of water. When used, do not throw it away, but put it in a bottle for future use. It can be used over and over again until discolored. For fixing prints take one and a half ounces of stock solution, and add eight and a half ounces of water; this, however, should not be used for more than one batch of prints.—*H. H. D.*

PRINTING-IN CLOUDS ON DEVELOPING PAPER.

In spite of the fact that the subject was touched on in THE PHOTO-BEACON for August, 1900, there seems to be comparatively little known about this simple operation by the majority of amateurs. For the benefit of such the following is submitted:

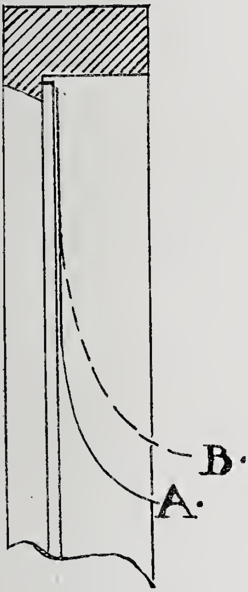


FIG. 1.

No. 1.—Hold paper tight against cloud negative at top, and while printing vary amount of contact as shown by lines A, B, Fig. 1, thus blending off sky at bottom. The cloud negative should be held in printing-frame without back, or, better yet, mortised in the center of a piece of stiff cardboard considerably larger than negative, to shut off surrounding light. Time for about two-thirds the depth of tone wished for finished sky, conforming somewhere near to outline of sky in view negative, though dark objects will print over clouds without difficulty. Put in view negative and print as usual, taking care not to get print upside down, mixing your clouds and foreground.

For the succeeding methods it is necessary to have a slower developer than M. Q., or else use more bromid and get green tones. Amidol works first-rate, giving great latitude of exposure and uniform results.

No. 2.—Print from view negative as usual (giving perhaps a trifle less exposure) and develop slowly. As soon as sky is discernible apply wet print to glass side of cloud negative, blending as in Fig. 1. With negatives of average density, the exposure with cloud negative, both in this case and in method No. 1, will be less than half that with view negative. If, after reasonable time in developer, sky is too light and balance of print not overdeveloped, repeat process, taking care to print from same clouds, but give much shorter exposure.

No. 3.—To get the effect of shaded sky without clouds. Print and develop as in No. 2. As soon as sky is discernible, expose to light coming over some horizontal object as in Fig. 2. Raise as indicated by dotted lines, gradually at first, then faster as light comes near horizon of picture; thus blending sky from dark at zenith to light at horizon. If necessary, repeat as in latter part of No. 2.

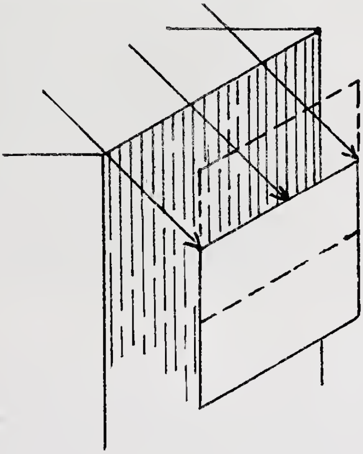


FIG 2

The two methods last described require considerable dexterity in handling, but have the advantage of giving better opportunity to watch progress. No. 3 is more of a busy man's makeshift, but on occasions when cloud negative is not available will be found a good remedy for "baldness." In method No. 2 care must be taken to clean off developer from cloud negative, for if allowed to dry on, stained prints will surely result.

In regard to stained prints — they are almost always the result of carelessness. If you rinse out tray after developing each print, pouring off developer into a graduate which is kept clean and filter it whenever sediment appears, you will never be troubled with stained prints.

E. B. COLLINS.

MORE EXPERIENCES.

Some time ago I worried THE PHOTO-BEACON editor and Mr. Ralph Martin about blue prints and an "experience department" and I learned some things and found out some more in the school of experience in which I have been studying. For instance, two of us tried the same view one day. The other fellow came from up in the mountains to see me, and some other things on the sea shore. I said stop 32, one-fifth second. He said 32, one-twenty-fifth, and his negative was soggy, as a cook would say of underdone cake. Air was clearer in his section of country. I overdid when I was in the mountains.

Another thing I learned some time ago was that a nice, bright, sunny day was *not* the best for picture work. I was in a town where my only chance for camera work came on a cloudy, drizzly day. Made exposures at various times from 8 A.M. to 6 P.M. with wide-angle telephoto, rectilinear lenses with stops from 16 to 128 and time from three to ten seconds, and out of sixteen plates one only was a failure, and that was where I used a ray screen and exposed fifty seconds where I should have made it nearer ninety.

Adelaide Beaty wants a question box and so do I, for I hit a snag last week, and now I "want to know." I made some prints one evening; developing paper, and they were all right. A couple of nights later a friend made some from the same negatives, using some of the same M.-Q. and hypo-alum I did — a stock solution. Prints were looking well in the hypo and were left there to tone brown. They did and were then given a prolonged washing in a marble set-bowl, a rubber tube carrying the water to the bottom of the bowl. It was a duplication of what had been done often, but those prints were streaked brown. I can not account for it as the only variation from my own work was the extra long hypo bath, and they seemed all right when they came out of that, I am told. Will not some one who has been in that fix please give us a boost.

A word about packing plates. I brought five dozen plates home from a trip of fifteen hundred miles by rail and boat. They were in a suit case and had a lot of jogging. I emptied my plate-holders in darkrooms, or my hotel quarters, at night and put them back in the boxes as they were originally packed, and they came out in good shape. The separators prevented chafing and the only plates I lost were a few underexposures and five of views along the St. Lawrence, which a Montreal chambermaid investigated by daylight while I was absent from my room. Light went through five of them, but the bottom three in the box came out good. Eternal vigilance is the price of negatives. CHAS. M. DOTTEN.

CHICAGO FOURTH ANNUAL SALON.

The fourth annual salon of the Chicago Society of Amateur Photographers will be held in the Chicago Art Institute from December 29 to January 24, inclusive. All pictures to be submitted to the consideration of the jury of selection must be delivered at the Art Institute before December 15. The jury of selection will be wholly photographic in its composition and will comprise the following gentlemen: Dr. Detlefsen, J. H. Field, Louis A. Lamb, F. Dundas Todd and Marshall Waite.

The Photo Secession has intimated that its members will send a very representative collection of pictures.

Full particulars to be had on application to the secretary, E. A. Thomas, Art Institute, Chicago.

WHAT TO PHOTOGRAPH.

"The Newsboy's Cash."—A newsboy, with a pack of newspapers under one arm, holding pennies in one hand and counting the same interestingly.

"The Apple Woman."—An elderly lady, with an old umbrella over her head, standing back of a small stand containing a few apples and other fruit.

"Plucking Flowers."—A young lady, wearing a hat and street dress, standing beside a rose bush (or any other kind of flower bush will do), plucking flowers therefrom.

"The Engagement Ring."—A young lady, sitting or standing near her mother or grandmother, who is examining a ring belonging to the young lady, given to her as an engagement ring.

"What Shall I Write Next?"—A girl, sitting at a writing table, with paper, pen and ink before her, her chin resting on the hand, meditating what to write next.

Quite a pretty picture can be made of a window overlooking a garden or other beautiful vista. In the view may be included a cosy chair, a small table containing an open book, or bit of fancywork, etc. Part of the window may be covered with lace curtain. To expose, draw down the opaque curtain and give a long exposure, sufficiently to get detail of the inside articles, then pull up the opaque curtain, but do not disturb anything else that might happen to be in the view, and give short exposure. Use non-halation or backed plates.

A. H. Mobery. Chicago.

"In the Gloaming."—A young lady standing beside a window containing potted plants, the young lady looking interestingly out of the window, watching the approaching evening.

"Father Time."—An old man, with a mass of gray, unkempt hair and shaggy beard.

"Expectation."—A girl, wearing kitchen apron, holding a plate containing food at arm's length over the heads of a dog and cat; the dog and cat looking anxiously upward, long for the meal they will soon get.

"Grandma Writing a Letter."—Grandma sitting at a table writing a letter, grandchild standing beside her, watching and helping her.

Pictures of Cats or Kittens.—Nice, sleek-looking pussies will make quite pretty pictures if arranged or caught in their natural attitude. We have seen pictures of three pussies sitting in a row with a bit of ribbon tied around each one's neck, each one looking upward. A piece of cord hung down toward two or three kittens will get them to pawing at it, which will also make a pretty picture.

"Eventide."—Father sitting on the doorstep reading, mother sitting near him on a chair with her knitting in hand. Should be taken, not with the subjects staring at the camera, but attending to their own occupations.

FAMILY PICTURES.

"At Mealtime."—A family can be so seated at the dinner table as to get a good likeness of each person.

"Reading the Scriptures."—Father or grandfather, sitting at a table with family Bible before him, reading to the family as they are grouped around him.

"Evening Pastime."—Family sitting around a table on which are a lamp, a few books and papers, each member interested in his book or paper.

"In the Kitchen."—The cook, peeling potatoes, or preparing other vegetables for mealtime, or making bread, washing dishes; in fact, there are a dozen different ways to make or get pictures of kitchen life.

"Look Pleasant, Please."—A child, with a camera on a tripod, photographing a very large dog.

"Playmates."—A child and a large dog; dog sitting on his haunches, child with an arm around the dog's neck.

"The Three Scamps."—Three boys or girls sitting on a rail fence, eating fruit. Probably called scamps because the fruit they have does not belong to them."

"The First Step."—A boy, with a mother dog at the top of a small flight of steps, puppy dog at bottom of steps trying to climb the same.

"In the Swim."—A naked baby in an ordinary wash bowl.

"Teaching the Baby to Walk."—The nurse holding the baby by the hand, the mother a few feet away with something attractive in the hand, coaxing the baby to come to her.

"Flirting Under Cover."—A boy and girl sitting on the ground, with an open umbrella tilted back of them. The picture can be taken either front or back view, but if taken from the back the umbrella must not conceal the persons entirely. If front view is taken, the persons must appear interested in each other and not staring at the camera.

"The Dinner Party."—A small child, seated at a small table containing dishes and food in proportion to the size of the table, also two or three dolls placed sitting on small chairs at the side of the table as guests.

"The Real Fisherman."—A small barefooted boy with pants rolled up, fishing-pole on shoulder and string of fish in the hand. A sporting fisherman, dressed in the garb of a sportsman, with up-to-date pole and reel in the hand, minus the fish, but offering the small fisherman a sum of money for his string of fish.

A. G. GRAFF.

THE W. J. Inglis Enlargement Company announce that they have purchased the plant and good will of the Boyce-Johnson Company, Masonic Temple, Chicago, and this purchase will give them a very complete outfit and paper machine for making all kinds of enlargements.

BROMID ENLARGEMENTS.

Enlargement, or printing pictures on a large scale from a small negative, is done by throwing or projecting the image on the negative through a lens on to a piece of bromid paper, allowing it to print, and then developing this print in the same manner as a contact bromid print. All the apparatus that is necessary is the camera, the support for the sensitive paper, and a proper room for making the exposures. The principle of enlarging is the same as that of throwing a picture on a screen by means of a stereopticon or magic lantern. The negative taking the place of the lantern slide. Enlargements may be made either by day or by artificial light, but daylight enlarging is the simpler and less expensive. To make enlargements by daylight one must first have a suitable room — one which can be darkened completely, with the exception of a small opening the size of

C. Puyo.

LECTURE.

Courtesy of the *Bulletin du Photo-Club de Paris.*

the negative, from which the enlargement is to be made. A room on the second or third floor, and one with a north light, is preferred. If an unobstructed view of the sky can not be obtained, a reflector must be placed outside of the window to throw the light against the negative and to distribute it evenly; in fact, it is better to use the reflector in either case. The reflector should be about twenty-four inches square, and may be of white cardboard, or a piece of board covered with white paper. Fasten it to the outside of the windowsill at an angle of about forty-five degrees.

Cover the window with black needle paper, or any other opaque material, cutting out an opening just the size of the ground glass of the camera. Take the ground glass from the frame and fasten in its place the negative from which the enlargement is to be made. It should be put so that the glass side of the negative is toward the window, and if it is reversed the image thrown on the screen will be right side up and much easier to focus. Set the camera on a table drawn close to the window, and of such a height that the ground glass of the camera will exactly fit the opening left in the window covering. The camera will thus be placed with the back close against the window and the lens pointing out into the room. The support for the sensitive paper must next be adjusted. One may have an easel made specially for enlarging, but a soap box will answer every purpose, and save expense. The bottom of the box should be covered with smooth white paper, and the box must be set in front of the camera, exactly at right angles to the negative. When all is arranged, the only light which now enters the room is through the opening in the window covering, and first passes through the negative, then through the lens, and makes an enlarged image of the negative on the white paper placed in front of the camera. The farther away the screen is placed the larger will be the image thrown by the negative, and it can be focused to make a clear picture by turning the lens out or in, the same as for focusing on the ground glass. Having focused the picture correctly, mark on the paper the position which the image occupies, cap the lens, and by the light of the red lamp adjust a sheet of sensitive bromid paper in the place where the image was thrown. Everything is now ready for the exposure, the length of time for which varies according to the density of the negative, the intensity of the light and the size of the stop used. Before making the print it is wiser to make an experimental trial. Take a strip of bromid paper and mark it in thirds. Pin it across the support and cover two-thirds of it. Expose the uncovered part for half a minute; cap the lens; uncover another third and expose for half a minute; cap the lens; uncover and expose the remaining third for half a minute. You will thus have three exposures on one strip of paper, one having been exposed half a minute, another a minute, and another a minute and a half. Develop and see which part is exposed most nearly correct, and calculate the exposure from this position. Negatives from which enlargements are to be made must have good detail and be free from spots, as all imperfections are, of course, enlarged in the camera.

If one wishes to make an enlargement from a film, it must be placed between a piece of ground glass and a piece of plain glass, the film side being toward the plain glass, and the ground glass placed against the window.

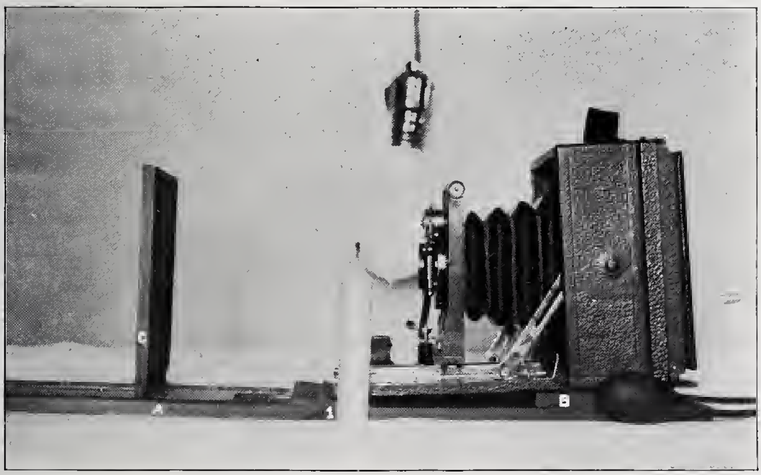
Any lens that will make a picture will make an enlargement, and enlargements may be made from any size negative, from the pocket kodak up to the large sizes. Anyone who can make a good bromid print can make a good bromid enlargement, and after the process has once been learned it will seem a very simple matter to make large prints from small negatives. I wish to say to amateurs, in concluding, that if the above directions are followed carefully you can make some very fine enlargements at a very low figure, as I have made hundreds by the above method.

HERBERT D. PIERCE.

COPYING BY LAMPLIGHT.

During this winter I have been making many experiments in copying by means of different kinds of night lights, and have discovered a method that I prefer even to daylight, especially for enlarging small work.

I find in working up small copy by this method, I get better results and a better printing negative than I have been able to secure when working by a window. The illustration shows the lights and apparatus in position ready for use, with 4 by 5 Wizard camera, Nehring enlarging lens.



The electric light I use is a 32 c.-p., with an opalescent bulb, which gives a beautiful, soft, white light. The electric light should be placed on the side of the copy requiring the strongest light, and the candle on the opposite side.

Any opening may be used while focusing, but when ready for making the exposure, cut down to 16 U. S. stop, and if the copy is a very light one, give 70 to 75 seconds exposure, for a medium copy (such as an ordinary gelatin print) 80 to 90 seconds, and a dark copy 95 to 115 seconds.

The copying apparatus shown in the illustration is very convenient, as it can be folded up into a space the size of a book, when not in use, and laid away without any danger of getting broken.

Any one who has any mechanical talent can make it at a cost of not over 25 cents. The bed pieces (A) are 21 inches long, 1¼ inch wide and ⅜ inch thick, and hinged at 1, so they will fold together; they are grooved on the inside, so that the copy-holder (C) and camera-holder (B) will slide easily in making adjustments. The copy-holder (C) is 5¾ by 6 by 5-16 inches thick, and hinged to a block, which slides in the grooves of the bed.

The camera -holder (B) is 5¾ inches long, 1¾ inch wide and ⅜ inch thick, to the underside of which is screwed another piece, the same thickness, fitted to it, and sliding easily in the grooves of the bed.

The camera is fastened in place to (B) by the tripod screw. The copy-holder and the camera-holder both being easily adjustable makes the process of focusing a very easy matter on any kind of work. When not in use the apparatus can be easily folded in a very small space, making it an easy matter to carry or pack away.

Dr. Wm. H. Steele.

The Photo-Beacon Exposure Tables are guaranteed correct. Price, 25 cents.

Do you like to swap or trade? Any kind of an exchange can be made through THE HOME BAZAAR.

DEVELOPERS AND THE TONING OF BROMIDES.

In the after-treatment of bromid prints one obtains so many different tones from the same toning formula that the idea struck me that the developer used had a great influence on the final result of the toning process. So evident did this fact become that a series of tests were tried to see if it could be substantiated in actual practice. The results are here tabulated.

	Hypo and Alum.	Iron Oxalate (Blue).	Uranium.	Copper (Fergusson).	Uranium and Iron. (Green).
Amidol.	Best.	Not satisfactory.	Whites are always more or less stained.	Best.	Best.
Metol-quinol.	Very unsatisfactory; often does not tone at all.	Does not give a pleasing tone.	Unsatisfactory.	Very often will not tone, and the tone is unpleasant.	Not satisfactory.
Hydroquinone.	Very unsatisfactory; often does not tone at all.	Good blue tones.	Good red-brown ones.	Very often will not tone, and the tone is unpleasant.	Fairly good tones.
Edinol.	Fair tones.	Not very satisfactory.	Good.	Good.	... .
Ferrous oxalate.	Good.	... .	Good red-brown tones.	....	....
Rodinal.	Good.	....	Not pleasing; inclined to bronze.	Fairly good.	Good.
Synthol.	Good.	....	Fair.	....	Good.
Pyro-soda.	Not satisfactory.	....	Not pleasing.	Good.	....

A. T. LAKIN, M.D., in *The Photogram.*

NEW PRACTICAL WRINKLES WITH RODINAL.

BY PROFESSOR FLORENCE.

That many of the newer alkali developers on the market could be better, also that many are excellent, is not to be doubted. This condition of affairs makes it imperative that the amateurs (mostly beginners) must make a number of experiments, jumping from one to another, before becoming thoroughly acquainted with any of them.

Depending upon the advice of your friends is out of the question, as Tom will praise this, Dick will praise that, and Harry will swear by still another. For the benefit of those who do not desire to experiment I will tell you of my experience with Rodinal.

Rodinal, like most of the names of developers, is a manufactured word signifying a concentrated solution having paramidophenol as its base.

This solution is ready for use and does not require the addition of any other solution, but since it is highly concentrated, the addition of water is essential. A coincidental fact, and one which is very much in its favor, is that Rodinal will give the best possible results with any spring, brook or tap water from any part of the country.

The power of this developer depends entirely upon the dilution. For soft negatives more water should be added, and vice versa for contrast. Rodinal is, therefore, a more convenient and practical developer to use than any other; it produces negatives clear, clean and of perfect gradation of the high lights, half-tones and shadows.

The proper dilution is as follows:

For normal exposure:

Rodinal	1 ounce
Water	30 ounces

For overexposure:

Rodinal	1 ounce
Water	20 ounces

For underexposure:

Rodinal	1 ounce
Water	40 ounces

To ascertain the condition of plates with questionable exposure, all that is necessary is to first place the plate in a normal solution and watch same very closely. If the image appears immediately it is overexposed. Pour developer out of tray and add more Rodinal until you have about the proportion of one to twenty, return to tray and continue developing. Should the plate be very much overexposed and looks foggy, add a small quantity of ten per cent solution of bromid. It is wonderful what small tendency a negative has to fog when developed with Rodinal.

Should the image appear very slowly in the normal solution, it is underexposed, and the developer requires an addition of water.

It is necessary to carry the negative quite far in the developer, more than you would with other developers. It will then have the proper density after it has been fixed.

Underexposed plates can be built up very strong; leaving them in a very weak developer one hour very well repays the wait; for the result is a brilliant, well defined negative. It is here interesting to state that Professor Godwin claims that negatives developed with Rodinal intensify better than negatives developed with any other developer.

As Rodinal is especially good for clear negatives, full of detail, it makes it suitable for lantern slides, diapositives, bromid-gaslight papers.

For lantern slides and diapositives use:

Rodinal	1 ounce
Water	30 ounces
No bromid.	

For gaslight papers use:

Rodinal	1 ounce
Water	20 to 30 ounces
Bromid (10 per cent solution).	40 to 50 drops

For Bromid papers:

Rodinal	1 ounce
Water	50 to 100 ounces
Bromid (10 per cent solution)	10 drops

The whites in the above papers remain absolutely white and show no sign of fog. The tone in the bromid papers varies from blue-black, black, to gray-black, depending on the strength of the developer.

Rodinal will keep for years, but after having been opened will slightly lose its color. This change in color has absolutely no effect on its strength and it can be used with impunity for negatives. I advise making a fresh solution, to obtain the best results with paper. Rodinal will not injure nor stain the fingers.

A SEPIA PRINTING PROCESS.

Paper used in this process is prepared from the ordinary ferro-prussiate paper, such as is used for copying mechanical drawings, etc., giving white lines on a blue ground. This, when sensitized as below described, printed, developed and fixed, gives pictures of a warm sepia tint of a pleasant appearance. It is needless to state that good sharp negatives give the best results.

There are two kinds of developers that may be used, but preference may be given by some to B, having the whites clearer than when developing by A.

SENSITIZING BATH.

Nitrate of silver	30 grains
Distilled water	1 ounce

The above may be used for a number of pieces of paper until the bath is exhausted, and this may be observed by the falling off in color of the paper, which should be of a brown tint when the bath is in a proper condition.

The paper is laid with its prepared surface in contact with the solution for a period not more than two or three seconds, then pressed on white blotting-paper, and dried quickly in a subdued light. It is now ready for use, and should be made as required, as it does not keep well for long periods.

PRINTING.— Print in a good light until the details of picture are fairly visible. This will take from two to five minutes, according to the strength of the light and the density of the negative. The picture should now be of an orange tint, and may be developed with either of the following formulæ:

A.—	Sodium carbonate	1 dram
	Distilled water	1 ounce
B.—	Ammonium liquid	½ dram
	Distilled water	1 ounce

DEVELOPING.— Develop until picture is of a dark brown color, wash for two or three minutes in running water, and then fix in the following solution:

Hypo-soda	½ ounce
Distilled water	4 ounces

This will take about three minutes. The print should then be washed as is usual for ordinary P. O. P. The print may then be dried in the usual way, or, if wanted quickly, by means of artificial heat.— *The Photographic News.*

"SEPIA."

SENSITISER FOR POSTCARDS.

M. Sollet gives the following as an excellent sensitizer for postcards, etc., which we have found to answer admirably, giving a pleasing shade of brown. The ordinary postcard has generally a sufficiently nonporous surface to answer without sizing, but most samples of paper, and even cards other than post, keep the image better on the surface when sized with gelatin or starch. The formula is as follows:

Uranium nitrate	450 grains
Silver nitrate	45 grains
Distilled water	1 ounce
Alcohol	4 ounces

This may be applied on a tuft of cotton or by letting a few drops fall on the place intended to be printed and spread with a glass rod. Print only as deep as the print is desired to be, wash in several changes of water, then in a weak solution of hydrochloric acid, and again in several changes of water.

ONE ought never to forget that by actually perfecting one piece one learns more than by beginning or half finishing ten. Let it rest, let it rest and keep going back to it and working at it over and over again until there is not a note too much or too little, not a bar you could improve upon. Whether it is beautiful also is an entirely different matter, but perfect it must be . . . . perfected, unassailable.—*Johannes Brahms.*

EDITORIAL TABLE.

THE catalogue of the Reflex Camera Company is unique in its class, because every illustration in it represents some moving object going at top speed. Horses, broadside on, at full gallop, the finish of trotting races, boys playing leapfrog, a dancing girl — such are the kind of pictures that illustrate the possibilities that lie before the owner of a Reflex camera. Those interested in this kind of subject should send to the Reflex Camera Company, Yonkers, New York, for the catalogue.

FROM Kirk, Geary & Co., San Francisco, California, we have received a copy of a very complete photographic catalogue issued by them, which is unique in at least one respect, inasmuch as it is the only one we know of that is illustrated by very good three-color work by the half-tone process. It is altogether a splendid bit of bookmaking. To parties west of Salt Lake City it will be forwarded on receipt of 25 cents, but east of that point, $1.

ON another page will be found a quarter-page advertisement of a new tripod introduced by G. Gennert. It is made of metal, is very light and, when closed up, very short. It is, of course, intended for small cameras.

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Published Monthly.

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CONVENTION PICTURE.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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VOL. XV. OCTOBER, 1903. No. 10.

CHANGING ONE'S MIND.

At a recent photographic convention I was asked to criticize the photographs that were on exhibition, and at the commencement I warned my audience that while I would give rules as far as I could I wanted them to understand that after all rules were only makeshifts for natural taste and ability. I also insisted strongly that my opinion was only that of one man, and the one I happened to express was the one I held at the moment of utterance, and that I reserved to myself full rights to change my views within three minutes or less.

After the session was over quite a number of the photographers referred to this last remark, expressing surprise at the frankness of my words, but none of them saw fit to take exception. However, on my homeward journey, during part of which I had the pleasure of the company of a number of photographers, one young man referred to the point, saying that he had always felt it was rather derogatory to his intelligence to have to confess even to himself that he had changed his mind; in fact, felt so still, and asked me if I could justify my attitude to myself without loss of dignity.

We happened to be standing at a station while he spoke, and I asked him to glance out of the car window at a house about one hundred feet away. I told him to look at it fixedly. In about five seconds I inquired, "Have you got a new point of view of the house?" He had not. "Then keep gazing fixedly." In a few seconds more the train started, and soon he admitted a very decided change of view. I now pressed the argument home.

"Why do you have a new point of view?"

"Because I have moved," was the reply.

"Then, when you have the same view it means you are standing still."

The same thing is true in the world of mind. A change of opinion, or point of view, is a positive proof, and the only one, of mental growth; the man who does not change his mind on a given subject for years is at a standstill, and ought to bewail his mental stagnation rather than brag about it.

F. DUNDAS TODD.

PICTORIAL COMPETITION No. 64.

Sometimes I feel encouraged over these abstract competitions, and sometimes I feel just the reverse. The mechanical side of art consists largely of spacing and arrangement of lines, and it is very disappointing to wade through a few dozen prints and find but few of them indicating even elementary notions of space and line. Might I suggest it would pay all these competitors and also all other readers of this journal if they devote a little serious thinking to their hobby, and begin by sending me 10 cents for a copy of "Elementary Pictorial Composition," where they will find these principles set forth in simple language and with a wealth of examples.

The following speaks for itself:

Editor Photo-Beacon, *Chicago:*

Dear Sir,—The enclosed photograph I send you for Competition No. 64, branches, etc.

I hunted in vain for a branch that would meet my ideal, and from lack of sufficient time, was forced to accept the one portrayed.

I should have given up, but you deserve the interest of your readers in these contests, and all should give you every encouragement possible.

It is a valuable exercise, and I regret my limited time forbids my sending something nearer my ideal.

The judges made the following awards:

First Prize — Charles Vandervelde, 28 Sinclair street, Grand Rapids, Michigan.

Second Prize — C. H. Gardner, 179 Prospect Point, West Brooklyn, New York.

Third Prize — John Moser, Hayesville, Ohio.

FUTURE COMPETITIONS.

Competition No. 66 — Snap-shot pictures. Closes October 31.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

A SPECIMEN STORY FROM "VOIGTLANDER AND I."

BY JAMES F. RYDER.

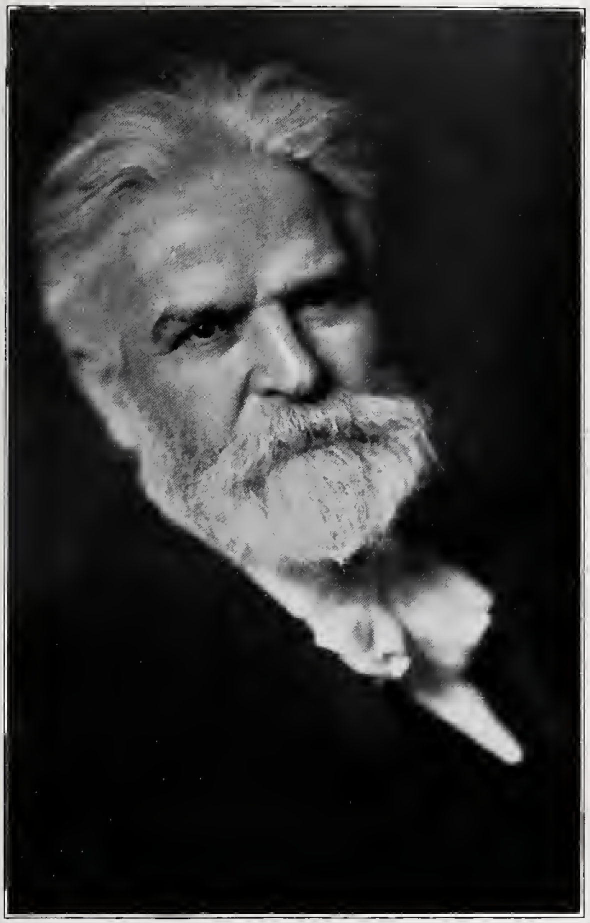
In a small village where there was no undertaker, a death had occurred and a casket was wanted, and one of the citizens going to town, was entrusted to secure one. This man was extremely fond of limburger cheese and could not resist purchasing a few pounds. The sample he got was very talented in a way, and he did not wish to carry it about with him, so he went to the express office to ship it home. The agent declined to receive it on the ground of its being "too loud." A happy thought struck him and he hied away to the undertakers, and with his prize well wrapped in repeated papers, put it in the casket to be sent to the train for the first run west. Before taking his seat in the coach, to return home, he looked into the baggage car and found " it " was on board. Before reaching the home station he sauntered into the baggage car and found the baggage master with his head sticking out of the side door and the casket placed by the open back door of the car. He looked at it in an interested way and was turning to walk back when the "trunk smasher" asked him, "Does that belong to you?" "Yes," said the passenger. "Any relation?" asked the "baggage thrower." "Wife," was the response. "Well," said the smasher, with head reached well out, "She ain't in no trance." If you want more, send $2.50 for the book to the author, 3586 Euclid ave., Cleveland, Ohio.

A NEW FLASH-LAMP.

G. Gennert, 24 East Thirteenth street, New York, has just introduced a new flash-lamp under the name of the Aurora. It is of the metal magnesium type, that is to say, it produces intense illumination by the combustion of the pure metal, and therefore it is impossible by it to have a disastrous explosion. Particulars of it will be found in the advertising pages. In the same place reference is again made to the Passy tripod, whose principal claim to notice is its remarkable lightness.

THE COOPER HEWITT LIGHT IN PHOTOGRAPHIC PORTRAITURE.

A new light for exposing plates is the latest improvement in modern photography. Ever since the introduction of the dry plate, twenty years ago, the tendency of all effort to improve the art of picturemaking has been along the line of freeing the camera from the sun. In the old days, when the sun refused to shine, the photographer grew grave and, with tears in his eyes, turned much ready money away from his door, bidding it return when the sun should shine again.



Copyright, 1903, by Pirie MacDonald,
Photographer of Men,
New York.

Taken with the
"Cooper Hewitt" light.

EDWIN MARKHAM.

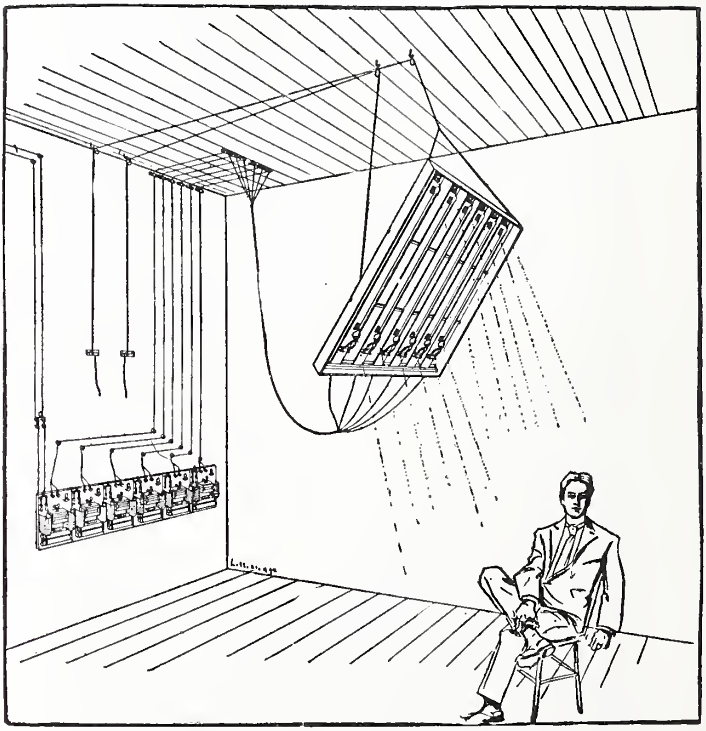
The lay mind, through long training, believes thoroughly to-day that if it is raining, if it is overcast, it "is not a good day for pictures." When one thought of photography one thought of the sun, upon whose smiling face results depended. But such strides have been made in the art that the sun has almost ceased to exist for the camera.

Plates have been rendered so quick that an exposure of one one-hundredth part of a second is an every-day occurrence under a cloudy sky, while a thousandth part of a second is not impossible in the strong sunlight, and results can be obtained even at night by time exposure.

And there is practically no limit to what a photographer can do at night. The flash-light lamp illuminates the darkest halls, and since the invention of the quick printing paper, which, like a sensitized plate spread out on paper, requires but an instant's exposure to daylight, electric light or gaslight, a picture can be made at midnight and be on its way through the mails to its prospective owner before the sun is up next day. It is no exaggeration to say that the sun never shines on some pictures.

But, with all the improvements in light and material, there had never been found a light which could be used for artistic lighting. The hard, "stary" effect of the flash-light is apparent to every one, and the exposures made under electric lights are lacking in softness and modeling. The new light has none of these defects and will enable the artistic portrait photographer to work under all conditions of weather. It is the invention of Mr. Cooper Hewitt, son of the late Abram S. Hewitt.

It is really an electric light working through the fusing agency of mercury — a form of Crookes tube. Imagine a vacuum tube about one and one-half inches in diameter and four feet long standing on end and surmounted by a glass ball. Inside, at the bottom, is about an inch of mercury. Wires extend from it at the top and bottom. When the current is turned on, immediately there appears in the tube a blue-white light. It spreads to the top of the tube, carrying some of the mercury with it in the form of a vapor. When it reaches the top of the glass, the cooling influence of the ball comes into play and the vapor is converted again into mercury and falls down to the bottom of the tank, to repeat the action as long as the light is being used. The light itself, which glows from the glass tube, is rich in purple purity. To the eye it

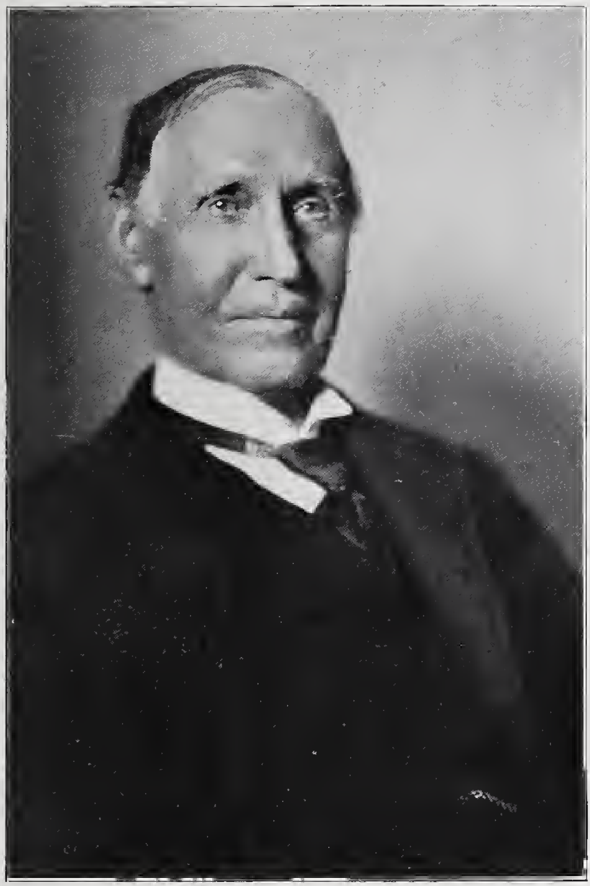


Method of using the frame of Cooper Hewitt light in photography.

does not seem so bright. One can look at it steadily without experiencing any uncomfortable results.

The first man to use the new lamp is Pirie MacDonald, who makes a specialty of photographing men. He uses three of the tubes in what he calls his lamp. Unlike most photographers, he has no "top light" in his studio, securing his light from two large windows placed side by side. In the jamb separating these two windows is his lamp. The three tubes of light cost about $300. It takes 114 volts to run them, backed by a power equal to 2.8 amperes. He estimates the combined power of light at 750 candles.

"I believe I am the first photographer to use this lamp," said Mr. MacDonald, "and although I have had it installed only a few weeks, I would not now be without it, because I have learned to depend upon it. You see, my difficulty has always been the question of light. I use very little light — only what you see coming through these two windows. A bright, glaring light, as you know, does not give any delicate modeling on faces, and that tone quality is what I am after. My best light here is about 11 o'clock. After that the smoke of the city closes in and it is all over. Unfortunately I work with the men, who can not all happen



Copyright, 1903, by Pirie MacDonald,
Photographer of Men,
New York.

Taken with the
"Cooper Hewitt" light.

RUSSELL SAGE.

in here at 11 o'clock. Even if they did, I could not handle more than one of them in the hour of good light. They like to get here about 4 o'clock, and then I have all kinds of difficulty in getting the light I want, and my lengths of exposure stretch out to eight and ten seconds, when they ought to be two and four.

"I needed something to help out my daylight, and I have found it in the Cooper Hewitt lamp. At 11 o'clock I need no extra light. At 2 o'clock I turn on one tube and bring the quality of my light back to 11 o'clock. At 4 o'clock I turn on another tube and am again back to 11 o'clock, and at 6 o'clock I use the third tube and my light all night is equal to 11 o'clock A.M. light.

"With it I have to expose only the short time that I desire, and by turning it off and on can control the amount of light with the same accuracy as I may my chemicals used later in developing my plates. For artistic portrait work, it is all that I can desire; it is ideal. It is so soft that it does not affect the expression of the face and yet so powerful actually that it is equal to daylight.

"I am enthusiastic about it and believe that nothing which has been discovered since the advent of the dry plate, twenty-five years ago, will so revolutionize photography, especially portrait photography, as will this light. It is an epoch-maker.

"The ordinary electric light, incandescent or arc, is apt to be unstable, and it is 'hard.' The flash-light is too gross to be considered. The field of this new light is broad. It can be used to illuminate theaters, because the tubes can be protected for transportation by being placed in boxes, and all you have to do is to attach the electric wires to have your lamps working.

"We have sufficient light in the flash-lamp for all practical purposes in theatrical work, but heretofore we have not had a single light which would aid the artistic photographer. No one knows exactly what the exact property of the light is. I know that it has no red rays in it and that it reduces the image on the ground glass to a black and white, so that I can form beforehand an accurate judgment of the resultant monochrome. As the light is constant in quality and quantity, it is a simple matter to standardize the exposure and to control that most difficult thing called 'texture.'

"In portraiture, texture is as individual as form, and until now the most expert photographers have been able only to suggest variety in complexional texture, because of the changing light. If one uses the lamp alone without daylight, there is possible the steady lighting of Rembrandt or the soft, mellow handling of Reynolds, without destroying the characteristic pose, because the light and not the sitter is moved."

COLORING LANTERN SLIDES.

I have no doubt that every photographer who does anything in lantern-slide work worth speaking of has at some time or another wished that the colors of the original subject could have been recorded with the same manipulation that caught the light and shade.

Without a doubt, and notwithstanding what may be said to the contrary, colored lantern slides — when properly done — are a decided improvement, so far as being attractive to a general audience, on the ordinary monochrome slide, no matter how good in quality that may be; and again, the average audience will not tire or weary in so short a time as they usually do with the monochrome variety before them.

The art of coloring slides for projection by an optical lantern is a most pleasant one, and presents no great difficulties beyond the special colors used, and the necessary treatment of them; in fact, considering how comparatively easy it is to color lantern slides by either of the following methods, there is no reason whatever why any person, by the careful cultivation of a few of their artistic capabilities, should not be able to bring colored slides before their audience or friends, of a much superior quality, and greatly in advance of the crude commercial productions.

Geo. J. Parrott, Ft. Wayne, Ind.

CONVENTION PICTURE.

Before I go further, I may say that all subjects are not suitable for coloring, as, for instance, statuary, which is totally unsuitable. Landscapes, generally speaking, are very suitable, and become much more real. Especially is this the case when water has been included in the subject. Studies of breaking waves, yachts and seascapes generally make admirable subjects, and waterfalls, torrents and such like subjects are nearly always enhanced by the addition of color. Again, mountains and rugged scenery, and what is generally spoken of as grand scenery by tourists, make splendid subjects for the addition of color, when judiciously applied. Here it might be as well to sound a word of warning regarding slides of glens and woodland studies comprising a quantity of foliage. These, unless the worker has used an isochromatic plate in conjunction with a yellow screen, and given a rather full exposure when photographing the subject—are better left uncolored, as great difficulty is generally experienced in rendering the different shades of green present in these pictures.

The next subject which commands our attention is the quality or technical class of lantern slide which we require for coloring. As a general rule, the class of slide which is best suited for our purpose is one in which its maker has just stopped short of producing the details of its highest lights, while the shadows are nice and transparent, without any blocking up by the presence of too much density. The sky portion of the slide should be quite clear and free from any veiling. This is a quality that must have strict attention, or the finished slide will not have the brilliancy it should, and will look, moreover, degraded in color generally.

I now propose to give a description of the colors, varnish, medium and brushes used, with a few simple directions — which the youngest tyro will have no difficulty in following — as to the method of using them. The kind of colors to be used are varnish or transparent colors, so that we have the choice of two kinds. The writer uses what he considers the easiest for the beginner, namely, transparent colors very finely ground in oil (these are to be obtained in collapsible tubes at any artists' colorman).

Below I give a list of the various colors required:

Yellows.— Italian pink, raw sienna and gamboge.

Blues.— Prussian blue (a very useful and largely used color, being extremely transparent and easily wrought) and indigo.

Greens.— The italian pink (which is not a pink at all, but a fine yellow), when mixed with either of the blues given, i. e., prussian blue or indigo, makes a variety of useful greens; verdigris, a very delicate transparent green, will also be required.

Reds.—Crimson lake, rose madder, brown madder and burnt sienna; ivory black is also required.

A medium will also be needed to mix with the paint before applying to the slide, and upon the use of the proper mediums a great deal of the brilliancy of the colors depends. Oils should be avoided, as they tend to lower the transparency of the colors.

There are three mediums I can thoroughly recommend, namely, pale copal varnish, megilp and japanners' gold size. Japanners' gold size dries very quick, and hence should only be used for the first washes of color, which have to be worked upon afterwards. If, however, one part of gold size is mixed with three parts of raw linseed oil, a medium little inferior to the ordinary megilp used by artists will be produced. The brushes should be of the best quality. The most suitable are those known as water-color sables. Oil-color sables are much too stiff in the hair for transparency painting; the oil colors being made more fluid than with canvas work, softer brushes are preferable. Three brushes will be quite sufficient; these should be of the round variety, not flat. No. 0, No. 1 and No. 2 are the most useful sizes, and it should hardly be necessary to state that they should be kept exclusively for this purpose. The brushes should be thoroughly cleaned with turpentine immediately after use, and should also be slightly greased.

The worker should exercise care that the hairs come to a good point when the brush is laid aside after finishing work, as, should the brush be allowed to dry with the hairs bent, it will be useless for any further work. This defect, however, can sometimes be remedied by dipping the brush in hot water and working the hairs to a proper point. The heat of the water will take the stiffness of the hairs away for a short time, and allow them to take any shape desired, and retain that when cold. Prevention, however, is better than cure.

A small palette (a piece of opal glass or a clean negative glass will suit perfectly) will also be required.

An easel of some kind is required, as in painting transparencies it is necessary to see the effect of the tints applied, and as they do not show properly if laid flat, although a piece of white paper is beneath, much valuable time is lost in constantly holding it up to the light to see the effect we are producing.

A good easel can be made of an ordinary retouching desk, or, failing this, one can easily be made by using a piece of glass fixed in a printing frame. The printing frame should be so placed that it will not slip, by being hard up against some ledge, and should have a strut, so that it will be kept at a convenient slope for working. A sheet of white paper, to throw the light up after the manner of the retouching desk, completes the arrangement.

We will suppose that all the materials are placed ready to hand, and we have a slide containing a bit of landscape with trees—an old ruined castle and a sparkling stream, with a piece of sky — which we want to color.

Now the sky is by far the most difficult portion of the slide to color properly. As I stated in an early portion of this article, the portion of the slide which represents the sky should be quite clear. If it is not thoroughly clear, it must be made so by means of local reduction. In coloring a lantern slide, the first thing to begin with is the sky. Prussian blue is always used for the blue skies, so in the case under consideration we begin by putting a small quantity of Prussian blue on the palette (no medium requires to be used). Take some of the color on the second or middle finger of the right hand, and begin by dabbing this roughly over the sky until it is covered with blue of the right strength and tint.

Chas. Vandervelde, Grand Rapids, Mich.

FIRST PRIZE.

The worker should be careful that the sky is not of too deep a color; it is better to err on the light side, if any. The sky is again gone over by dabbing with the same finger, starting at the top, and this must be continued (the touch becoming slighter and lighter each time) until all the decided marks of the finger disappear, and it assumes a uniform or graduated tint. Some writers advise the rubbing down the skin of the tip of the finger which is used for this dabbing process, on a piece of very fine smooth sandpaper. This I do not advise, as the cure of the furrows is of a very temporary nature, for, in a couple of days or so, Dame Nature, indignant at the treatment of the cuticle, retorts by growing a skin, if anything, rougher and thicker than the first. So I recommend aspiring workers to use their dabbers just as they are. The marks caused by the furrows can easily be done away with, if a little patience is taken, and by going over the paint sufficiently often with an extremely light and gentle tapping action—taking care to alter the position of the hand from time to time, so that one set of the furrow marks shall cross another. The peculiar touch necessary in this process is only acquired with practice. The sky should always lighten toward the horizon line. When, by the above means, the worker has produced the uniform or graduated tint, it is usual to introduce clouds. The white cumulus species are easiest to do. A stick (generally an ordinary tapering penholder) is cut to a tapering wedge-shape at one end, and a piece of clean, soft, chamois leather of about five inches square, is stretched over the wedge point, the loose end of the chamois leather being gathered together and held by the fingers. With this ingenious stump, the paint is wiped off exactly where required, leaving a sharp, clean upper edge, and the lower edge is softened into the sky by dabbing.

The leather is moved, so that a fresh piece of it may be brought under the wedge point whenever the portion in use becomes charged with paint.

When clouds of the cirrus variety are wanted, the worker can easily produce them by means of the stick, described above, or his finger covered with a clean piece of wash-leather; but used as a dabber, so as to slightly disturb and remove portions of the sky tint. The long, thin, white streaky species of cloud are produced by the wedge stump (without any leather covering). It (the wedge stump) is gently tapped over the sky tint, so that irregular white lines may be left by the displacement of the color. These lines are afterwards generally softened down by means of dabbing with a corner of chamois leather.

Great care must be exercised by the worker as to the disposition and shape of the clouds introduced, which should be carefully studied.

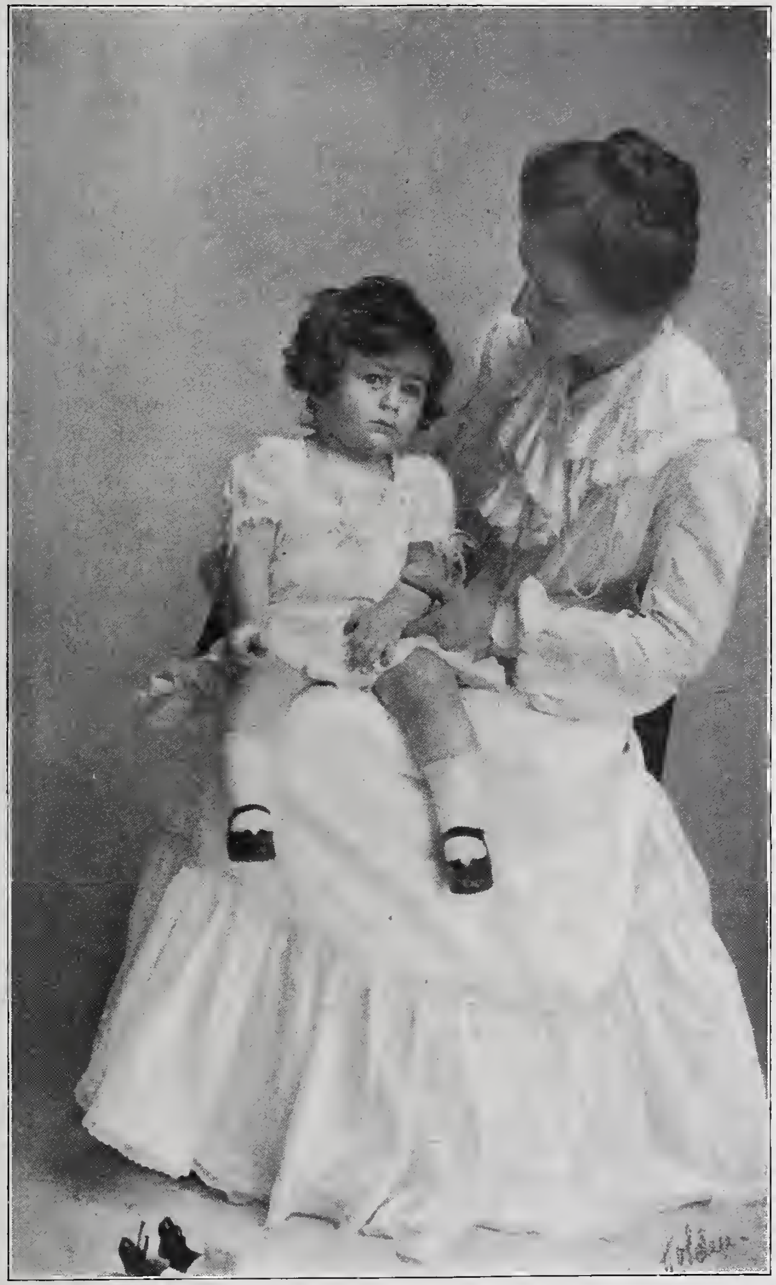
Clouds of a darker tint than that of the sky are usually added by the brush after the dabbed tint of the sky has become thoroughly dry; and as this is a very difficult operation—owing to the extreme ease with which a sky is ruined—I would recommend beginners to attempt the addition of lighter clouds only until a considerable quantity of experience has been gained.

In subjects where there are sunset effects, crimson lake and italian pink are the colors used, the different colors being gradually merged into each other by dabbing by the finger alone.

Having finished our sky, the next operation which we will essay is to wipe it out, where it has encroached on objects near the horizon, hence the wedge-shaped stump is again pressed into service to remove the surplus paint or color from the trees, ruined castle and the horizon generally. The trees and grass are next covered with the necessary colors, bearing in mind to give plenty of variety to the numerous shades of green. The trunks of the trees are best colored by the burnt sienna or the brown madder. The stone work of the ruined castle is best touched up with a little burnt sienna or other suitable brown. The indigo is a splendid color for the purpose of tinting up the water, which, where it is of the still, deep kind, with beautiful reflections, should be colored with a view to making the most of its mirror-like qualities and appearance on the screen. The high lights of reflections are best wiped out by means of our wedge-shaped stump and chamois leather, and, in the case of sparkling ripples, the high lights should also be taken out by the same method.

Perhaps it will be as well—at the present place—to drop a few hints to our readers on the graduations of tones which are to be obtained by the judicious mixing of two or more colors together, and so altering the color of them both.

Greens can be made of almost every tone, from the hardest, crudest and coldest tint, right through a series of



Alfred Holden, Philadelphia.

CONVENTION PICTURE.

very beautiful and brilliant colors, to the yellow warm green, by mixing verdigris and italian pink. In cases where brightly colored greens are wanted, squeeze a little of each of these colors from their collapsible tubes, and, thinning out the verdigris with the medium (megilp, or whatever is being made use of), add a little italian pink, when it will be noticed that the color will gradually become warmer and brighter in tone. The more of the italian pink added, the warmer the tone will be; and by a judicious mixture of these, many different-toned greens, of considerable use and value, can be obtained. When greens of a less brilliant kind are required — as, for instance, colors for trees, etc., in landscape—the sparing addition of burnt sienna will usually give tints of pleasing quality. As previously mentioned, prussian blue, when mixed with italian pink, gives a variety of useful greens, and perhaps the greens which are obtained by this method are the most useful for all work of a general character, as they do not possess the sparkle and brilliancy of the others, mentioned above, though they can be made sufficiently bright for foreground work.

When a little less italian pink is used, they come in handy for middle-distance work; and with less still, do admirably for the bluish haze of distance.

Grays are perhaps the next most useful colors, and are obtained by mixing italian pink, crimson lake and prussian blue in different quantities, according to the color wanted. When blue predominates, it is of a cold nature; if the lake is present in large quantity, it will assume a warmer tone; and if italian pink and blue are present, it will tend to a greenish or bluish tone, according to whatever color predominates.

Red is a color seldom used, and difficult to produce. When the roofs of cottages are represented by red tiles, a mixture of crimson lake and a little burnt sienna is the most useful. Crimson lake mixed with italian pink produces orange, another color of little use, except perhaps in the case of golden sunsets.

The browns are necessary for many purposes, and those given are among the most useful. These are handy for stone buildings, tree trunks, foregrounds of plowed fields and roads, though, of course, the worker must exercise some thought as to the color most suitable for his subject.

Moonlight effects are very realistic in lantern-slide work, and it should not be necessary to add that subjects which have to be taken with the source of light in front of the camera are very suitable for these moonlight effects, though a picture which has been taken in a good diffused light can be used, provided it is darkly printed.

Some clear patches must be present in the slide, or there will be a great lack of effect. Very little if any other color than the judicious distribution of blue is necessary; occasionally, in fact, very good results are to be produced by simply staining the slide. This staining is easily effected. The following is the procedure necessary: Take the slide, which must previously have been well washed, and soak it for, say, a minute in a solution of common sulphate of iron (strength immaterial and of no importance); next wash for the same time in water, and immerse in a solution of ferricyanid of potassium (red prussiate of potash). A convenient strength is that of ten per cent solution. When this has been done, it will be found that the slide has become stained a beautiful even prussian blue color. Some workers take an easier and safer method than this, by simply staining the cover-glass, which may be an ordinary lantern plate fixed, thoroughly washed and stained.

Previous to starting to color the slide at all, take a fairly strong and thick solution of gum arabic, and dip the end of your brush in it, and allow a drop to fall on the slide exactly where the moon is wanted. This drop should not be too large, as it is upon its size that the size of the moon depends. Now, when the gum is fairly well dry, put the blue tint all over the sky in the usual manner, and then place it in a slow oven for a couple of hours. When you take it out, you will find that the spot of gum has become very brittle and cracked, and only requires the slightest touch to move it off, leaving a most perfect and clear circle (the moon).

The slide should be thoroughly dried in an oven—as above mentioned—though this is hardly necessary—and then masked and bound. The writer, as a matter of fact, does not wait until his slides are dry, preferring to bind them up while wet with a sufficiently thick mask between the cover-glass and image, and, with a little care, there is no risk of disturbing the colors by mounting wet, and it is a big safeguard against dust, the lantern-slide painter's greatest enemy.

The following method of coloring transparencies is generally known as the "aniline method," and is regarded by a large number of workers as being of a fugitive nature.

To those persons who are skeptical on this point, I may point out that I have a large number of slides colored by this method some five or six years ago, and in these the colors have not changed perceptibly, and I quite fancy they never will.

The process, moreover, is generally looked upon by amateurs as much easier than the oil method, and without a doubt some splendid effects are to be produced by its aid.

I may state that the same technical qualities necessary for oil coloration are required in a slide which may be proposed to be colored by this aniline method, and unvarnished gelatin slides give the best results. Coloring can be commenced immediately the process of washing to eliminate the hypo has been thoroughly completed. The colors used by the writer are as follows: Blue, green, red, yellow, orange, flesh and brown. These are diluted with water.

Some time ago, Roster pointed out that the best results are obtained in coloring lantern slides by the use of aniline dyes, and suggested in the Italian *Bulletino della Societa fotografica Italiana,* the following as satisfactory: "Blue: Indigo carmine. This is the best color for the sky. Green: (*a*) Malachite green. This is very brilliant, and must be sparingly used. It is difficult to spread it evenly on large surfaces, and it is not suitable for plants or foliage. (*b*) A mixture of tropaelin, O, and indigo carmine is the best for foliage, and according to the proportion of these two, a cold, brilliant, or yellowish green is obtained, and also the color of dead leaves. Yellow: (*a*) Tropaelin O for bright yellow; mixed with eosine, it gives flesh tints. (*b*) Mixtures of tropaelin O and orange for darker and golden yellow. (*c*) Orange alone. Red: (*a*) Eosine for a bright red. (*b*) Mixture of eosine and orange for brilliant fiery red. For brown: (*a*) Bismarck brown or vesuvin; the former is to be preferred for warm brown tones. (*b*) Mixtures of bismarck brown and indigo carmine for cold brown tones."

John Moser, Hayesville, Ohio.

THIRD PRIZE.

If the lantern slide has been taken direct from the washing water, the first thing to do is to mop up all the superfluous water which may be clinging to the gelatin with a fine sponge, which should be entirely free from grit of any description, as the presence of the minutest particle may scratch the tender gelatin and certainly ruin the slide.

If the transparency is dry, a liberal soaking in cold water should be given, so that the gelatin may be softened, afterwards mopping off the superfluous moisture as directed above.

I recommend that the entire subject should be gone over with a weak, thin wash of a warm nature. According to subject, the writer uses either yellow or pink. The reason for this procedure is that any hardness or chalkiness is softened down considerably, and a very nice, warm, delicate and desirable tone is added. The strength of this wash should not be strong enough to be visible on the screen. To those readers who have at any time colored their slides by means of water-colors, or done any water-color painting, the remaining operations will be familiar.

Although an easel or support of some kind may be very handy for numerous workers, the present writer prefers to hold the slide in the hand when coloring by this method. The warm tint, referred to above, is best put on with the slide in an inverted position. While that tint is still flowing, the blue tint, very much diluted with water (very seldom can any of these aniline dyes be used without previously being well diluted with water) is applied to the sky portion of the slide, commencing very close to the horizon line, and using stronger color as the top of the sky is reached. When this tint has set, and this is not long, the slide should be turned right side up, and the extreme distance of the landscape should then be treated to light wash of weak blue.

This procedure must be followed, no matter what objects may constitute the distance, and the color should be brought well down on the foreground. Occasionally after this treatment the foreground has a cold look about it, and to remedy that, a wash of a reddish or yellowish color should be applied. It sometimes happens that the worker can produce striking effects in this process by the mixture of, say, two colors; while again, occasionally, by applying a series of different washes of separate colors consecutively much better results are obtained. It should be thoroughly understood that every wash applied sinks into the gelatin film, and can not be removed by any arter procedure or wash of color that may follow. The middle distance of a subject, consisting of, say, trees in foliage and shrubs generally, is best gone over with a wash of orange, or a combined orange and flesh one.—*The Amateur Photographer.*

John B. Haggart.

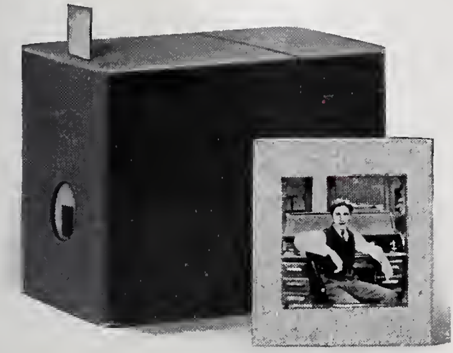
LIGHT IN HOME PORTRAITURE.

In taking pictures by the light of a sitting-room window it is not only necessary to consider the distance of the subject from the window but also the size of the window. The relation these two bear to one another has been the subject of a theoretical and practical study by Mr. John Randall, whose results are summarized in the following table, published in *Photography:*

Distance from window in feet.	Area of window in square feet.								
	16	25	36	49	64	81	100	121	144
1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.	1.
2	1.5	1.4	1.3	1.2	1.2	1.2	1.2	1.1	1.1
3	1.7	1.6	1.5	1.4	1.3	1.3	1.3	1.2	1.1
4	2.	1.8	1.6	1.5	1.5	1.4	1.4	1.3	1.2
5	2.6	2.	1.8	1.7	1.6	1.5	1.5	1.4	1.3
6	3.3	2 5	2.	1.8	1.7	1 6	1.6	1.5	1.4
7	4.	3.	2.4	2.	1.8	1.7	1.7	1.6	1.5
8	5.	3 5	2.8	2.4	2.	1.8	1.8	1.7	1.6
9	6.	4.	3.2	2.8	2.3	2.	1.9	1.8	1.7
10	6.8	5.	3.6	3.4	2.6	2.2	2.0	1.9	1.8
11	8.5	6.	4.	3.6	2.9	2.4	2.2	2.0	1.9
12	10.	6.8	5.	4.	3.2	2.6	2.4	2.2	2.0

The figures on the top line indicate the areas of the windows in square feet; the first column on the left the distance from the window. Thus the relative exposures from one to twelve feet from a window sixteen square feet will be as 1.2 to 10; from a window 144 square feet area, as one to two.

These figures refer to the light which strikes a surface parallel to the window, and not to that falling along a horizontal plane. The illumination on a sitter placed in the usual position would be of the nature here assumed.



CAMERA CLOSED, WITH PICTURE.

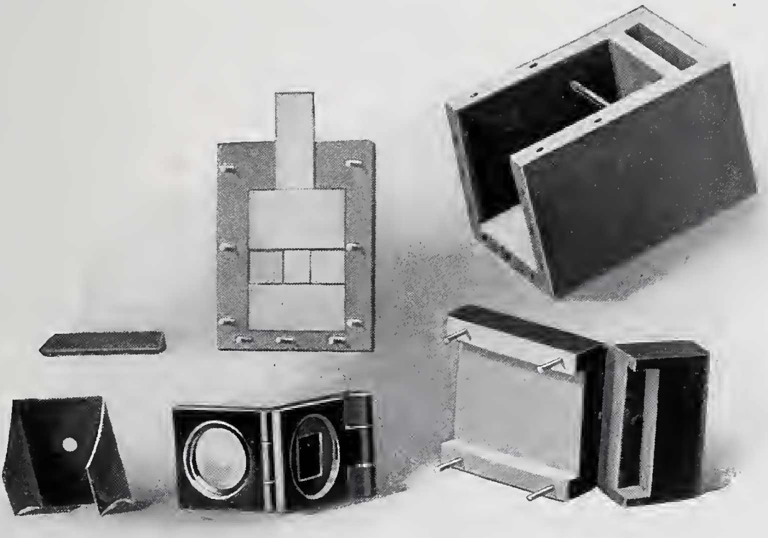
AN INGENIOUS MECHANIC.

This is the Donnelly camera, the smallest in the world, made by Martin Donnelly, a pen expert employed by the L. E. Waterman Company, from tools used on the work-bench, together with a pocket-knife.

The frame of the camera is an ordinary white wood box fastened with pins made from punches, such as are used in opening the vent holes in caps. The shutter appliances are made of tin used on the bench for cleaning out the fissures of feeds. One small piece with an opening about 3-32 in size was inserted in the front of the camera for a diaphragm, in back of which another small piece was arranged to slide up and down, thereby opening and closing the shutter. This second piece had a flange which protruded a short distance above the top of the camera, and by pushing it down the exposure was made, the same as with the button of an ordinary kodak.

The lens was fashioned from a magnifying glass used by pen setters and examiners, and when folded was only ½ inch square and about ⅛ of an inch thick. This lens was fastened behind the shutter without injuring the construction of the magnifying glass, which can now be used the same as ever.

The focus of the lens was then ascertained, and a small strip of wood with a slit placed in the back of the camera so that a piece of ordinary film could be inserted and held stationary, making a fixed focus and acting as the plate-holder. The box was covered with



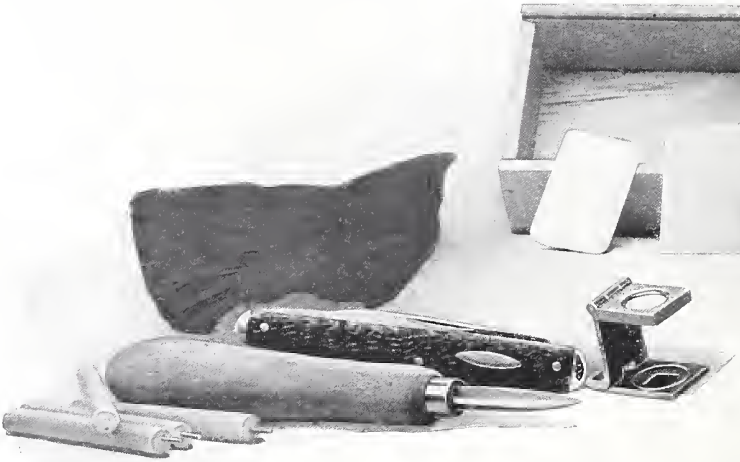
THE CAMERA, SHOWING PARTS.

cloth, such as is used on the work-bench for wiping machine oil and ink from the gold pens. The crevices made by joining the box were rendered light-proof with melted wax, such as is used to stop up the vent holes in caps.

All told, the number of tools and pieces used in making this tiny camera was eight.

The camera is small enough to carry in the palm of the hand. By carrying a number of pieces of cut film, it can easily be reloaded without danger of being light-struck. The camera is held under the operator's coat, the change taking only a few seconds.

The camera shows the kind of ability to be found in our mechanical department. The accurate, painstaking, conscientious work of the man that makes the pens is the *best* help to the man who sells them.—*The Pen Prophet.*



TOOLS AND MATERIALS USED FOR MAKING CAMERA.

THE METOL-HYDROQUINONE DEVELOPER.

The metol-hydroquinone developer, commonly called the "M.-Q," is becoming rapidly the most popular developer of the photographic craftsman, not only with the amateur, but also—especially abroad—with the professional worker. It is now fairly on the way to supersede and displace pyrogallic acid, as the leading developer, forging slowly but surely ahead of any of its competitors. The wide range of its adaptability is, perhaps, its greatest recommendation, one and the same developer being applicable to the whole range of photographic developing processes. Its cleanliness is another good point. So is its inexpensiveness. Its relative ability to compensate for errors of exposure covers a fairly wide range. The developing agents which enter into its constitution are the best in their respective class, metol being the most advantageous fast-working developer there is. Hydroquinone, one of the slow class developers that gives the maximum amount of latitude in exposure, with the exception of glycin. All these points account for its wide popularity.

Whether there is any advantage at all in mixed developers, however, is a mooted question, and the recent experiments made by our leading photographic scientists do not favor them. Some believe that the mixing of a detail-giving, soft-working developer like metol with a slow, hard-working agent like hydroquinone, will bestow on the mixture the advantages of both. This the writer demurs to. The only result obtained is a marked loss in the advantages of each separate constituent, and it is hardly possible to detect in the mixture of both any compensating advantages. Take the case in point, for instance, the addition of metol to hydroquinone causes the latter to lose its quality of great adaptation to overexposure, the fast-working metol starting development on its own account, with but a slightly retarded action. On the other hand, the speed of metol is barely slackened at all by the presence of hydroquinone. Its valuable quality, to give, if desired, extremely soft negatives, is greatly jeopardized if not lost by the presence of the hydroquinone, which, stirred up to action as it were by the lead of metol, piles up density in a very obnoxious manner.

George J. Parrott. Ft. Wayne, Ind.

CONVENTION PICTURE.

The modern negative must needs be a thin one, especially so in artistic work and portraiture, and it is one of the weak points of all M.-Q. developers that they give too readily an excess of density and tend to work hard in inexperienced hands.

There is another point which must not be overlooked when mixing developers, and that is that very often we may get entirely different combinations than those we are looking for. Between these coal-tar products, whose constitution is in some cases even yet a matter of speculation, chemical reactions take place which change completely the properties of the mixture. And M.-Q. is a case in point. As far back as the nineties, Captain Hondailb observed that a mixture of metol and hydroquinone presented certain peculiarities that could not be accounted for by a mere mixture of them. Later on, Milton B. Punett, the chemist of the Standard Dry Plate Company, remarked that a properly compounded mixture of metol-hydroquinone behaved differently from either of these single agents, and perceived that some intimate chemical combination must take place to account for these effects. Later on, Dr. Luigo Cramer made a study of the same subject, with similar results, and recently the Brothers Lumiere, taking up the same experiment, found that if saturated solutions of metol and of hydroquinone be mixed in the proportion of two molecules of metol to one of hydroquinone in the presence of a saturated solution of sodium sulphite, a compound was formed with entirely new properties, notably that of developing without alkali (like amidol), which behaved in a different manner from either of its individual constituents. They named this new product metoquinone.

So much for the mixing and especially the irrational mixing of developing substances. In the present case, however, and though on the whole it is not the writer's opinion that such mixtures are of any advantage, a developer has resulted which has proven exceedingly useful and answered most excellently the wants of a great many photographic workers, who look for simplicity before anything else. M.-Q. developers, in solutions, in powders, in cartridges, are legion. M.-Q. formulas are innumerable. All do the work, but alas! how? The reader will easily perceive from what precedes how important it is to make a judicious choice among these heterogeneous and hybrid formulas, if he wishes to secure anything like good results. He should further be cautioned against purchasing ready-made cartridges whose composition is for the most part unknown. More often than not they are chance combinations lauded very highly by well-minded but unqualified persons; or they are mixtures cunningly combined by self-interested dealers for the greatest benefit of their business and of their pocket. With but few exceptions, they fall short of their much-wanted qualities and do not answer the needs of either the professional or the advanced amateur.

A few formulas are given here, carefully selected among many, which will yield the finest results that a combined metol-hydroquinone is capable of. If the reader will but give them a serious trial, and judge of their results not on the development of a dozen plates taken at random, but on a few months' everyday work under varied conditions and circumstances, the writer feels confident that they will be thoroughly appreciated.

As a single solution developer, the following is very satisfactory:

20 ounces or 1,000 c. c. water, boiled or distilled.
500 grains or 50 grams sodium sulphite crystals.
500 grains or 50 grams sodium carbonate crystals.
15 grains or 1.5 grams bromid of potassium.
50 grains or 5.5 grams metol.
40 grains or 4.5 grams hydroquinone.

Normal developer: Use full strength.

For very soft effects: Add one volume of water to every volume of developer.

Bromid of potassium solution 1:10 as required. It is greatly preferable, however, whenever possible, to keep two solutions at hand, as they are more elastic and more readily adaptable to all kinds of work. Either of the two following are excellent:

No. 1.

A.

16 ounces or 400 c. c. water, boiled or distilled.
240 grains or 12 grams anhydrous sodium sulphite.
60 grains or 3 grams metol.
60 grains or 3 grams hydroquinone.

B.

16 ounces or 400 c. c. water, boiled or distilled.
240 grains or 12 grams anhydrous sodium carbonate or potassium carbonate.

Normal developer: Equal parts of A and B + one to two parts of water. Potassium bromid solution 1 :10 as required; or

No. 2.

A.

Metol	60 grains
Hydroquinone	40 grains
Sodium sulphite, dry, C. P.	60 grains
Water	20 ounces

B.

Carbonate of soda crystals	2 ounces
Sodium sulphite, dry, C.P.	1 ounce
Bromid of potassium	20 grains
Water	20 ounces

To develop, use equal parts of each. Further addition of a potassium bromid solution 1 :10 as required. But by far the best method and the one the writer heartily indorses, on account of its elasticity and the readiness with which it can be adapted to all kinds of photographic work, is the following: The solutions of metol and of hydroquinone are made up *separately* and so compounded as to be either used singly or mixed in any desired proportion. Four solutions are required:

A.

32 ounces or 1,000 c. c. water, boiled or distilled.
1½ ounces or 50 grams sodium sulphite anhydrous.
160 grains to ½ ounce, or 10 to 15 grams metol.

B.

32 ounces or 1,000 c. c. water, boiled or distilled.
1½ ounces or 50 grams sodium sulphite anhydrous.
160 grains to ½ ounce, or 10 to 15 grams hydroquinone.

C.

30 ounces or 1,000 c. c. water, boiled or distilled.
3 ounces or 100 grams sodium carbonate crystals.

D.

30 ounces or 1,000 c. c. water, boiled or distilled.
3 ounces or 100 grams potassium carbonate, C. P.

A ten per cent solution of bromid of potassium must always be at hand. The reader will perceive that A or B, used singly, will form an excellent developer, and, mixed, an excellent M.-Q. combination, thus:

1A + 1C, or
1B + 1D, or
1A + 1B + 2C (or 2D for great under-exposure), or
2A + 1B + 3C, or
1A + 2B + 3C.

If, in the foregoing formulas, D or the carbonate of potassium solution be used, instead of C, extremely energetic developers are obtained rather strong for general work but well fitted for extreme under-exposure and fast snapshot work.

Water is to be added as required to obtain softer results. The bromid of potassium solution 1 :10 is added as required.

An excellent formula for portraits in the studio is the following:

3A + 1D + 30 to 40 minims of the bromid of potassium solution 1 :10 per ounce of mixed developer.

For lantern slides or like subjects, the hydroquinone and potash solution will answer every need thus, for instance:

2B + 1D + 10 drops of bromid solution for each ounce of mixed developer.

Again, for gaslight papers, the following will prove as good as any:

1A + 4B + 4 to 5 C and a few drops of bromid, if necessary.

These few examples show that the modifications obtainable by this method are practically without limit and able to meet the most fastidious demands likely to be made on them. In respect of adaptability, speed, excellency of results and convenience, the writer knows of no better method of development, and he is confident that on a fair trial it will be found highly satisfactory and all that could be wished for.

A. K. Boursault.

"HOME PORTRAITURE."

(An address at the National Convention.)

Mr. President, Members of the P. A. of A., Ladies and Gentlemen: In speaking on the subject of "Home Portraiture," I am tempted first to give you my opinion on portraiture as a whole. I believe that the day will come when there will be no discrimination between portraiture of one kind and portraiture of another kind; that is to say, normal portraiture, so far as lighting the face and the preparation of the actinic conditions are concerned, is a matter governed by natural geometrical principles, which, when observed, will produce a correct portrait so far as these elements are concerned. These are truths for the *artisan* to know and handle; the work of the *artist* is not now under consideration. It matters not whether one is under the gallery skylight, or under a home window, or whether working under the western sunset light, or in a deep cañon or a grove, where the light is concentrated by an opening in the forest, conditions will be subject to the natural laws of geometry and of the actinic power. If there is any one in the world who should know these laws, it is the man who uses light in taking portraits as a professional photographer. But the day is coming when the amateur as well as the professional will know these laws and use them in the taking of portraits. He is learning them to-day, and the *professional photographer* should be very careful that *he* is the first to know and utilize these laws, in order to obtain a business advantage by their use. If it is conceded that my exhibit, which you will find in the Foreign Exhibit, is normal portraiture, then it follows that home portraiture is practical in ordinary professional work. The question then is not, can good work be done at home, but does one know how to utilize home conditions so as to produce normal portraits? I want to make this talk as practical to you as possible from the standpoint of dollars and cents; at the same time I wish to state in very few words those underlying principles in nature to which I have just referred.

Portraiture depends principally upon three specific natural conditions; these are, first, the radical expanse of the light source in relation to a certain point on the subject illuminated. The point on a plane surface which is held horizontal may be imagined to be illuminated by the complete dome of the sky, which dome may be geometrically represented by a half sphere placed down on to a plane surface over the point which is illuminated. This half sphere would intercept any ray of light coming from any point of the sky to shine upon a point under the sphere, and if one-half of this sphere be removed, light from one-half of the sky can shine upon the point. If one-quarter of the sphere only be removed, light may come from one-fourth of the expanse of the sky to shine upon that point, and so on. Thus it is seen that the mental picture of a light source, as it creates intensity at a certain point on a surface, is the base of a cone of light rays, the point illuminated being the point of that cone. Then in order to establish a unit for this character of radial space it is only necessary to decide on a certain fractional part of a complete sphere, which fractional part will become the base of a unit cone of rays. An illuminated point on a plane surface is confronted by an amount of radial space equal to a half sphere, but as an illuminated point recedes within an opening, the amount of radial space is gradually lessened, and at any certain point within that opening, the opening, considered always as the base of this light cone, will always have an exact radial value expressible in simple units of radial space. So far as the concentration of light is concerned, the photographer cannot do better than read "Artistic Lighting," by James Inglis, which teaches us the value of a concentrated light source and opposed to the common method of working under the ordinary skylight, in which the base of the illumination cone is too extended, falling, as it does, on a face from so many different directions that there is created no simple design of light and shade upon the face. These conditions tend to produce flatness instead of modulation on the features.

The second element in normal portraiture is the position of the head in relation to this concentrated source of light. To easily determine the position which is approximately correct, turn the face first directly towards the source of light, so that both sides of the nose are illuminated by that source. Then gradually turn the face away till one side of the nose is thrown into shadow. Near to that point is the condition of lighting which is used in 90 per cent of all the portraits which are made for the sake of the likeness principally, whether painted or made by photography.

The third element in normal portraiture is the condition of contrast which exists on the subject. This contrast must be modified by reflectors, being careful that the reflector be not dropped

A. T. Proctor. Huntington, W. Va.

CONVENTION PICTURE.

below the altitude of the face in order that this secondary reflected light may fall slightly from above, for the same reason that the direct light should come from above, simply that the true modulation may result.

Now, a practical word with reference to degrees of opacity. I would like to ask any photographer present what percentage of the light of the sky a clear glass in a common window takes away from it; that is, suppose a face to be lighted through a simple opening without glass, and then that a common window glass be placed over that opening, what percentage of the actinism of the sky is taken away by the glass as in the second condition? (The lecturer waited a moment for response from the audience, but no reply came to him.) I hear no response, and that brings out a point I wish to make, namely, that you have, perhaps, never investigated, and therefore do not know how to answer this query. We, as professional photographers, should be prepared to answer such a question, and if we do not know what percentage of the light of the sky is taken away by our skylights, it is high time that we should take steps to determine this and all such questions which pertain to photographic practice in this regard. During the few days of this convention I have had in private conversation the opinions of several of our members on this subject that from 5 per cent to 15 per cent of the actinism was taken away by the intervention of the clear glass of an ordinary window. The truth is, that we may tint a piece of printing-out paper on the inside sill of a window for ten seconds, when the window is removed, whereas if we lower the sash to its place and make the exposure, we will find that thirty seconds will be required to produce the same tint. Then, if the light works with one-third of the rapidity, it is clear that two-thirds of its actinic power has been removed. To measure in like manner the opacity of any skylight, simply tint a piece of p. o. p. paper a certain number of seconds outside of the skylight and facing the pure sky. Then immediately under the skylight, and close up to it, expose another piece long enough to produce the same tint. Ten seconds taken as the numerator, and the number of seconds required to produce the same tint under the skylight taken as the denominator, will form the fraction representing the actinic value of the skylight as compared with the pure sky as a unit. Thus, if sixty seconds were required to produce the desired tint under the skylight, that light would have 10-60, or one-sixth the value of the pure sky; that is to say, five-sixths of the value of the pure sky is removed by the material which composes your skylight. It is evident, therefore, that if we substitute pure sky light for the gallery condition, we have increased to a wonderful extent the working power of our light source. The long-established custom of working under a skylight makes it inevitable that a man should be surprised upon seeing such work done by a common window, since he never has realized how slow is the action of his gallery light in reality. From this we see that the extra force to be obtained from pure sky increases greatly the value on an illuminated face, and renders home portraiture thoroughly practical, so far as the time of exposure is concerned. With the ordinary rapid rectilinear lens used at its full opening the normal exposure is frequently as little as one-fourth of a second, and seldom more than one second.

The tendency of the times among our best workers is to master all the intricacies of process, to the end that the mind may be perfectly free to approach the individuality of the subject and obtain a likeness which will properly present it. Many of our advanced workers have already eliminated the old style of top and side skylight. Pirie MacDonald is working with two windows side by side in an ordinary room. Hollinger uses a side light only, but somewhat larger.

Actinism as an exact value, while it is the basis of photographic practice, is a thing to be known and measured by the artisan, and is entirely apart *as an exact value* from the work of the artist.

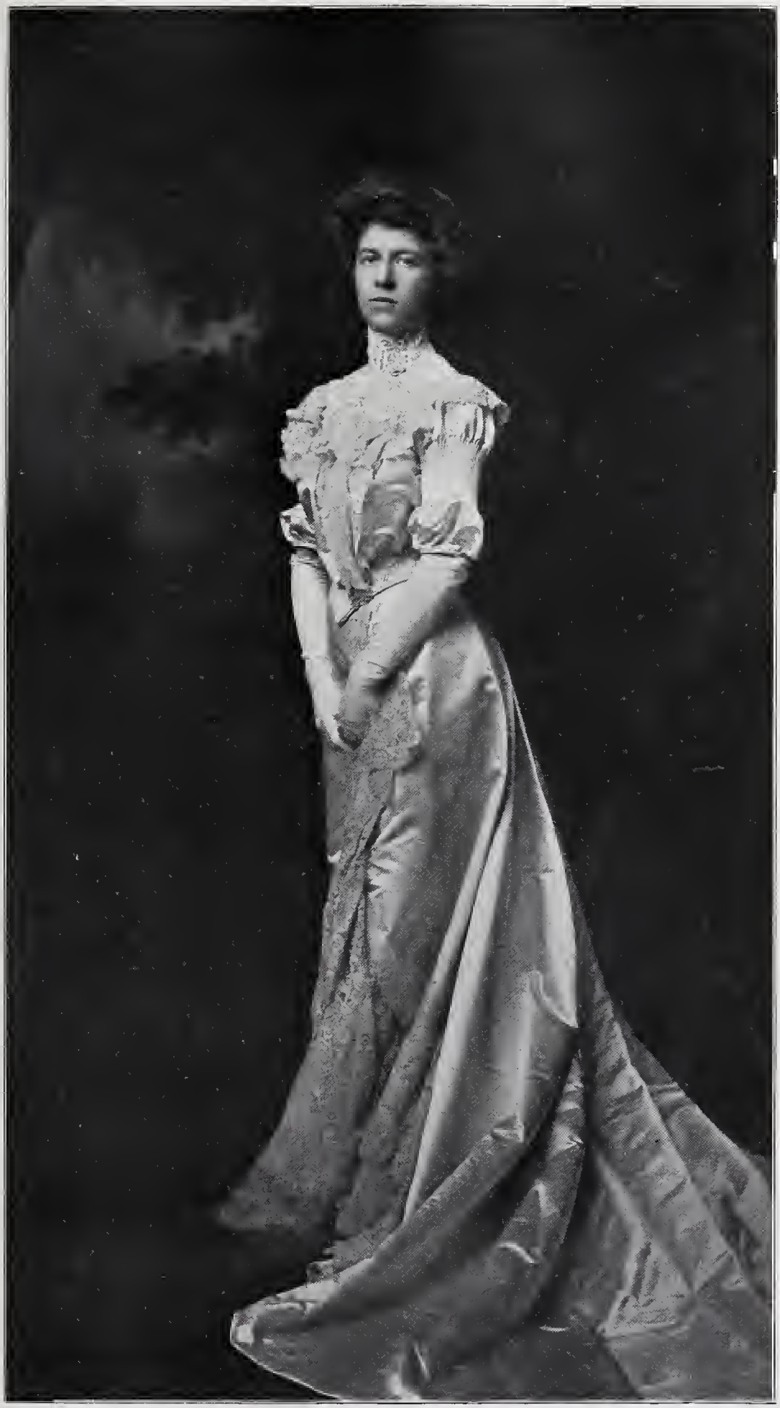
This is the reason that it must be known so thoroughly that the mind will use it automatically, for only when this can be done is the artist free to follow his own intuitions so far as the handling of the subject is concerned. The inch is necessary to architecture, but is not a factor in the artistic education of an architect; in like manner I make no claim that the unification of the photographic values will make an artist, although it is absolutely necessary to the worker as an artisan that such values be established. The best painters of the world lived before the fact of actinism was discovered; and in a finished product, whether photographic or from the brush of the painter, it is not necessary that actinism should have entered as a factor into its construction. It is a fact, however, that a system of study for the comprehension of the light effects in nature by the mind may be based on the law of actinism, which law may bring the mind to an ever-increasing capacity to perceive and enjoy the varied operations of this law in nature. The study of actinism, therefore, will sharpen the perception of both the painter and the photographer; but aside from this fact it is absolutely essential to the photographic worker as an artisan. The whole process of photography is a process of elimination of small difficulties; the beginner will fail in the simple act of focusing or locating the image.

Let us now come to the practical reasons why the professional photographer should learn to do home portraiture. A few years ago, in Houston, Texas, my partner and I found a man taking medium sized portraits on aristo-platino paper at 35 cents per dozen, and he was practically without work even at that price, and was sitting in his chair doing nothing. Several other photographers in the same place were in like plight. We decided to take our kodak to other parts, and went down an old historic railroad, the Columbia Tap, to the village of Columbia, and found that no photographer had visited those parts within the last fifteen years. We did a good business, and then went further south on the Brazos River to another village, which we worked with success; then continued to the mouth of the river to Velasco City, and at that point were very successful. This illustrates the condition which prevails in many places; and when one is free from the idea that a skylight is necessary to do good work he is at the same time free to go into any part of any adjoining village and successfully pursue his occupation. Furthermore, the exercise obtained in traveling from house to house, which may be done on foot or with a bicycle, and which may extend through the country if desired, is no small element of satisfaction in the general result. The cost of equipment for this kind of work is ridiculously small compared to the income to be derived from an intelligent use of the materials. Furthermore, it is desirable that the professional photographer should learn to do home portrait work before the amateur has entirely wrested this field from him, and in order that he may reap the benefits to be derived from the work itself, and from the instruction of the amateur, which the professional should always be able and willing to give as a matter of business.

The wider the dissemination of knowledge respecting the manipulating of photographic apparatus, and the more general is the love of photography as an art among the people, the more will the work of the true professional be valued at its proper rating; and thus it is seen that photography is by no means going to be undervalued or depreciated by the extension of home portraiture, but rather greater interest stimulated and aroused, so that the art will be dignified, and the profession accorded a greater measure of remuneration for skilful and artistic work. Much has been said by the resident professional photographer in condemnation of the "transient" worker; and the latter usually has deserved severe criticism for his price-cutting methods of competition. But it is well known that some of the most bitter "price wars" have been between resident professionals, and the question is in truth one of the business methods, ability and manhood, and not whether a man is established or transient. In our own practice we have never charged less than the best photographers in the place visited, except when first practicing this method of working in Omaha, Neb. On the contrary, for the last six years we have charged more than the best photographers, and at the present time at least double his prices. They are usually our friends, and have many times been glad of our visit, as we have illustrated to their citizens that photographs should be well paid for. Our own standing as photographers has risen in proportion as we have been able to eliminate the anchorage of gallery methods and increase the quality of work.

It is manhood, ability and character that will make us respected, and the man who fears to lose his dignity by going into a home to take a portrait already must hold that dignity in a trembling hand. The doctor suffers no reproach by going to the home. Again, by taking note, it may be seen that of all the subjects which belong naturally to portraiture, a large percentage is brought to the gallery with the greatest inconvenience. It requires an actor to appear natural at a studio sitting, or else a strong and tactful man at the camera. Procrastination on the part of those who really desire portraits often keeps them away from the gallery for years. They could be caught at home with a ten-minute sitting. The ball dress, the baby, and the invalid suggest to us reasons for home portraiture. The professional also should make it known that he will finish the work of the amateur for a stated price. The item of retouching alone, when the practice of portraiture shall be common among amateurs, will be no small source of income to the professional photographer. If photographic practice among amateurs could be multiplied by ten, and the professional photographer could secure half of this work to finish, he would reap a net profit in which there would not enter any element of time consumed in receiving and waiting on sitters, posing, or playing monkey with the baby.

When photography was discovered, it was thought that the painter would be the first to utilize it in his labors; but the painters soon found that the law of nature which impressed the sensitive film was something of which he, as well as the rest of the world at large, was entirely ignorant, and which could only be learned by a long and tedious process of experimental practice. For this he had neither aptitude nor intention, and so the employment of photography as an assistant in the painter's studio was by many painters derided. Furthermore, even up to the present time, the practice of photography has necessitated certain fixed conveniences, it being understood that the sitter must come to the operator, and thus the skylight was established as a commercial necessity. Up to the present date we have thought that experience was the only door to photographic practice; this is true, simply because we have not dealt with the natural force of actinism as we have dealt with other natural forces; not having given it a simple unit and scale of measurement. Photographers have "guessed" long enough, and should begin to follow some exact and definite method of procedure. This by no means will strike a blow at art, which is always the handmaid of truth. No photographer can approach nature closely until he can go away from his skylight and work with perfect confidence in his knowledge of the values with which he deals, measuring them as simply and quickly as he would values of weight or volume. The theory of existing exposure meters is that certain paper which discolors under actinic action shall reach a standard tint as indicated by a painted slip to which it is compared. Difficulty, however, is frequently met by the color not passing exactly the standard color to which it should be compared. All this difficulty may be avoided by adopting some system of measurement, namely, that any ordinary p. o. p. should be discolored in the light to that point where it may be just plainly distinguished from the original color of the paper. This method places in the hands of every pho-



S. H. Lifshey, Brooklyn, N. Y.

CONVENTION PICTURE.

tographic worker the means of making simple measurements from day to day, as the slips of paper may be carried in an ordinary note-book, and tinted through a small hole cut in the cover of the book.

I know that there are many old photographers who would feel, perhaps, humiliated at the bare suggestion that they require a system of more accurate measurement of light values; but who ever heard of a carpenter, or even an architect, being humiliated because he was daily dependent on a rule? In making this tint referred to, the paper should be held behind the cover of the book, and at the point where the face is to be located, and turned directly toward the source of light. The paper should be exposed until the tint produced through the hole in the cover is *just plainly distinguishable* from the original color of the paper. The number of seconds required to produce that time is the normal exposure in photographing the face in that position, provided diaphragm No. 16 is used in the lens, and any ordinary emulsion be employed, as supplied us for use with any of the modern plates or films. If a certain emulsion be found to be over-timed by this diaphragm No. 16, diaphragm No. 32 may be used with that emulsion, giving the exposure indicated by the paper test. The lens should be carried about with the diaphragm always at the proper opening for the emulsion used. Then if a larger diaphragm is desired to be used in making the exposure, for each number that it is opened the exposure is reduced one-half; or for each number that it is closed the exposure is increased by two. In actual practice no light is too strong to illuminate a face, so long as it does not inconvenience the eyes and thereby unfavorably affect the expression.

F. M. STEADMAN.

PRACTICAL HINTS.

To clean off a negative, to get a clear piece of glass, put the plate or plates in any kind of a vessel that can stand heat, and cover them with cold water. Then place on the fire, and the film will, in most cases, leave the glass before the water arrives at the boiling point; if not, it can very easily be removed.

This method is, I think, better than any I have seen in print, and the soaking in a strong solution of carbonate of soda and the nail-brush, as recommended by Mr. Todd in the January number of THE PHOTO-BEACON, can be saved for other purposes.

MOUNTING.

To keep prints from pulling the mounts out of shape when drying, place the cards for about fifteen minutes in clean water. Then drain off, but while they are still wet place the prints in position. If put to dry on a flat surface, they will dry flat and stay so.

If you think it spoils the mounts, try a single one and you will find out that it does not.

To get a print in perfect contact with the mount and make a quick and neat job out of mounting altogether, invest about 10 cents in a piece of chamois skin. Soak this in water, and after the print is in position squeeze the skin, but leave it quite damp. Now press it against the center and from there work out to the edges. Then let it follow the edges of print and the whole margin of card.

DEVELOPING PAPERS.

A preparation that will remove yellow spots has, under the name of "Stains Off," lately been placed on the market, and is sold at a cost of 25 cents for four ounces (!).

Instead of buying that, make up the following solution:

Powdered alum	½	ounce
Sulphuric acid	1	dram
Water	16	ounces

and when the prints are newly made the stains will disappear as soon as placed in the above solution. If old ones are to be treated, it will take a few seconds.

Sixteen ounces of "Stains Off" would cost $1, but to figure out the cost of sixteen ounces after my formula is quite a job and, what's more, it can be used over and over again.

Anyone using developing papers

has, I am sure, many a time felt disappointed at the way his prints, that looked so perfectly lovely in the washing water, turned out when dry. Not alone that they were too dark, but they took on a disagreeable muddy hue. For this there is a great improvement in running them through what is known as Farmer's reducer.

C. H. Gardner, Brooklyn, N. Y.

SECOND PRIZE.

The carbon kind of paper I do not like and never use. It has to be a very thin and worthless negative that will not give better results, with more detail, on the soft working variety, if treated in the following manner:

Instead of exposing and developing for the high lights, look only after the deep shadows, and when they are dark enough, fix. Now put the prints one at a time in Farmer reducer and leave them until the high lights are right, then wash.

As these operations have to be performed in good light, so that a close watch can be kept on the prints, the solution will rapidly turn green and useless and some of the

Ferricyanid of potassium	1 ounce
Water	16 ounces

has to be added once in a while. The mixing must, however, be done in the graduate and not in the tray.

TONING BROWN.

A pleasing tone of brown can be had on developing papers by treating them in exactly the same way as when intensifying a negative in mercury. I use

Bichlorid of mercury	240 grains
Bromid of potassium	240 grains
Water	25 ounces

and blacken in

Sulphid of soda, crystals	2 ounces
Water	10 ounces

Prints treated with mercury are said to fade, but I have prints toned brown more than six months ago that have not changed a bit, and that is all I know about it. CHRISTIAN F. J. NISS.

Col. John A. Ockerson, Chief of the Department of Liberal Arts of the universal exposition to be held in St. Louis in 1904, is in receipt of information from the British Royal Commission, indicating that the photographic exhibit from Great Britain will be the most elaborate and complete ever made by a foreign country at an exposition.

Hon. Benjamin Stone, M. P., has taken great interest in this exhibit, and, with a collection of photographs from the various amateur photographic associations of England, Scotland and Ireland, intends to outdo any and all nations who are represented at the World's Fair.

A communication received by Colonel Ockerson from the American representative in London, is to the effect that the United States will have to be up and doing if they hope to equal this exhibit arranged by the British photographers.

ABREAST OF THE TIMES.

Are you interested in innovations, and do you desire to keep abreast of the times? If so, I will take the liberty to acquaint you with a few facts.

Most all the amateurs do not remember, or even do not know of the old albumen days, accompanied by difficulties and disappointments, when the photographer was compelled to get up before sunrise to silver and fume his paper for a day's good work. If it clouded up and rained, there was time, patience and money lost.

What a boon to the photographer was the advent of the ready-prepared P. O. P.

Still, in those days there were people in ruts, the same as at the present time, who could not immediately see the advantage of this paper, or were skeptical, with the result that they lagged behind those who at once realized its advantages.

History is repeating itself, for the lag-behinds in a rut do not realize the advantages of the newer washed chlorid developing papers.

These papers are now on the market with the principal objection overcome, namely, an even coating of emulsion and uniformity of speed. Furthermore, the surfaces are such as to give all sorts of effects, including an absolute carbon and platinotype. Blue-black, black, gray-black, brown-black and sepia tints are obtained by the strength of the developer and length of stay in the fixing bath with alum.

How this paper simplifies things! You do not have to depend upon old Sol. Three hundred prints can be obtained (by hand) in a day, although three thousand can be printed by the new McIntire Photo Printer. Enormous amount of time saved, and last, but not least, no gold or platinum used.

Most all the papers on the market to-day are very good, but what surprises me is that so little attention is given to the developer. It seems that those who are using these papers are satisfied with the old standby, "metol-hydroquinone," not realizing that more brilliant results than they are getting can be obtained with these papers.

I have tested these papers with every developer on the market, and find that with amidol, and used with my own formula, results are obtained as with no other formula or developer. I make up a stock solution of:

Water	40 ounces
Sodium sulphite crystals	2 ounces
For use above stock solution	10 ounces
Amidol, dry	40 grains
10 per cent sol. bromid,	5 to 10 drops

If I have not my weights handy, I use a fairly new 10-cent piece to weigh my amidol. This gives me exactly thirty-eight grains.

Forty grains of amidol will produce a blue-black. This can be modified to a gray-black by using less amidol. I sometimes use bromid papers for contact printing, and find the amidol gives me the same rich, brilliant effects, but I take only thirty grains to the above formula. H. C. A.

INTERNATIONAL PHOTOGRAPHIC EXCHANGE.

The secretary of the above society, Mr. Fayette J. Clute, Marye Terrace, San Francisco, California, sends us a circular announcing that the World Wide Photo Exchange has now become amalgamated with it and that he will be glad to send particulars to all those who desire to exchange prints with others.

EDINOL.

Amateurs, as a rule, are the most enthusiastic devotees of photography, and it is to them that the manufacturers of new photo chemicals appeal when they have anything new to introduce. Professionals begin to show an interest only when the chemicals have passed the experimental stage.

Edinol, the new developer of the Bayer people, much to the surprise of everyone, has, however, been an exception to this rule. Its many advantages over other developing agents appealed to the professional immediately, and it has been adopted by some of the largest photographic firms in this country, who are using it exclusively for plates, paper and lantern slides, and who admit they are now obtaining better results than ever before.

In order to further stimulate interest in Edinol, the manufacturers have recently introduced tablets, furnishing undoubtedly the most convenient form of developer. These tablets are entirely different from anything heretofore on the market; they keep well, dissolve very quickly, and make a solution that can be used for all purposes — plates, papers and lantern slides.

To place it within the reach of everybody, Edinol is put up in ¼-ounce and ½-ounce packages, which sell at 20 and 40 cents respectively, thus enabling anyone to experiment with this developer at a small cost.

Another extremely interesting product which this firm has just brought out is Bayer's Ruby Varnish. This is something that fills a long-felt want, as will be seen from its many different uses. It is recommended for backing plates to prevent halation, and coating electric bulbs, darkroom windows and darkroom lamps to make them lightproof. It can be used for blocking out negatives and many other things that will suggest themselves to the photographer.

The fact that this progressive concern, with its unlimited resources in the way of technical knowledge and skill, has entered the photographic field, should convince every photographer that his beloved art is to receive the scientific attention it deserves, and should induce him to reciprocate by making impartial tests of the new products brought out by these famous manufacturers.

FOURTH ANNUAL SALON, CHICAGO.

The indications are that the fourth annual salon of the Chicago Society of Amateur Photographers, to be held at the Art Institute, Chicago, from December 29 to January 24, inclusive, 1903, will be a great success.

The officers and committee having charge of the salon have reason to believe that a larger number of pictures will be hung than at any other previous salon, and that the grade of work will be higher than heretofore exhibited; this is saying a great deal, because all the Chicago salons have been a decided success each year, showing an improvement in both number and quality of pictures hung.

The high class of work displayed at the last salon was thoroughly appreciated by the public, who daily visited the Art Institute in large numbers to inspect the pictures.

A departure was made this year in

the selection of a jury in that it is wholly photographic. The names of the members of the jury of selection is a sufficient guarantee that the pictures submitted to its consideration will receive the most careful, painstaking and intelligent attention, and also an assurance that the standard of work required in order that the pictures submitted may enter the "select class" will not be below last year.

The loan collection of pictures of the Photo-Secession will be hung in the salon, and it is being awaited with considerable interest.

FOR FUZZY WORKERS.

A correspondent says he has seen excellent results by the following method: Take a sheet of clear colored celluloid with a mat surface and cut from it a piece a little smaller than the slide of the plateholder in ordinary use. Cut out the center of the slide, leaving all around a margin of less than half an inch, and then cement or glue the celluloid on to it. When ready for exposure, withdraw the ordinary slide from holder and in its place put the one on which the celluloid is mounted, the exposure being made through this. The mat surface will scatter the rays sufficiently to soften the image.

DEFECTS IN ROLLER BLIND SHUTTERS.

I recently made the discovery that my roller blind shutter had developed a number of very minute holes quite sufficient to fog an ordinary plate in a very short space of time. As, perhaps, many amateurs may find themselves in the same predicament as myself on making this discovery, I send you herewith my remedy, which, although simple, is thoroughly effective. In half an ounce of ether — or chloroform — stir up a few drops of asphaltum varnish, such as is used for making black rings around covers to microscopic slides. Then cut up very finely a piece of ordinary bottle rubber about the size of a large cherry-stone; slightly larger will do, but do not make the solution really thick. Leave for several hours until all is dissolved. A shake occasionally will help it. For use, dip an ordinary camel-hair brush into the bottle and quickly lay coat upon shutter blind. Let front portion thoroughly dry before rolling blind, and then do the other portion. In this way the whole blind may receive an entire new coat — or several if necessary — and be made perfectly light-tight once more.

M. P.

EDITORIAL TABLE.

"CONCERNING COOKE LENSES" is the title of a booklet by J. Roland Taylor, setting forth the possibilities of photography with one of these lenses. The writer seemingly believes in ocular demonstration, for seven reproductions from untouched prints show what it can do in flash-light portraiture, interiors, "Photo-Secession" art, plain photography as sharp as needles, both in summer and in winter, in wet and in dry. The booklet will be sent on application to Taylor, Taylor & Hobson, St. James building, Broadway and Twenty-sixth street, New York.

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SOME ST. LOUIS NOTES.

It is rarely I make any reference to my wanderings in these pages, even although I do cover from three thousand to five thousand miles every year, but I feel that my readers are considerably interested in some things that came under my notice during a recent visit to St. Louis.

Of course, I went to see the wonderful fair buildings, being much interested therein, because, as many of my readers know, I was on the photographic staff of the Chicago World's Fair during the construction period and I was able to compare the one with the other at the same stage. Well, I may just as well say at once, without any beating about the bush, that the good folks in St. Louis will put the Chicago Exposition, magnificent as it was, several degrees in the shade.

But what I am to write about particularly concerns the photographic exhibit in the Liberal Arts and Fine Arts buildings. Through the courtesy of Mr. Strauss and Mr. Cramer, who accompanied me, I had the pleasure of quite a long chat with Colonel Ockerson over the proposition as laid down in his circular letter, which was reproduced in our September issue. My readers will be glad to know that the Colonel impressed me as a man of evenly balanced mind, strongly sympathetic toward photography, both as a science and an art, and one able to take a sane view of all the conditions that bear upon his position, and to act accordingly. It goes without saying that at least two contending factions are trying to utilize him. One consists of a few artists who hold that no photographic rendition can possibly be artistic in the best sense, and they insist that photographs should not for one minute be considered as possible in the Fine Arts building. Against them is a small group of photographers who assert very decidedly that photography is artistic, that they have solved the problem and to them alone belongs the right of deciding what photographs are artistic and what are not, and particularly that they consider no artist is fitted to pass judgment on their products. Therefore, the exposition authorities must permit them to sit in judgment on themselves, and accept what they see fit to mark with their union label. Outside there is a great mass of artists and photographers with open mind who are perfectly willing that photographs should be treated like paintings, etchings, engravings and statuary, and be submitted to the committee of painters, etchers, engravers and sculptors, and if by them considered worthy of a place in the Fine Arts building, there they shall be hung.

Colonel Ockerson has a thousand and one similar problems to handle, and so he has faced the situation squarely, decided upon the best course of action in his judgment. The rules he has made are there to stay, and no amount of talk will make him modify them, for the simple reason that he thinks he has found the best solution of the problem, and, besides, there is no longer time to spare in threshing all the old straw over again.

Do my readers really realize how near is the time for sending in the prints? Seemingly not, for I understand that not one of the bodies selected to nominate judges has yet submitted a name. And yet the date for such nomination expires with the last day of October. Again let me remind the reader that all pictures have to be in St. Louis not later than the 30th of January, 1904, so those who intend to exhibit must needs be busy right now if the very best possible print from a negative is to be secured.

Some months ago I spoke of one of Strauss' business schemes, the gallery of St. Louis' 400 that adorns his walls, and the expedient he fell upon to increase its volume. On entering his reception-room, the first thing that caught my eye was a huge, handsomely bound volume lying on the table, and this I found to be devoted to the "Bench and Bar" of the city. Similar books are being planned for other professions and thus the "gallery of living celebrities" will be almost indefinitely and yet skilfully expanded. No one will be surprised to learn that Mr. Strauss has many new schemes up his sleeve for the World's Fair year. Since they are only in the nebulous stage I am not at liberty to mention them, but one is an emphatically new notion that will demand brains to make it successful, but its author thinks by it he will make the portraits of his life.

I have had quite a fight with Mr. Cramer over his new trichromatic plate, which is intended primarily for three-color workers. My old friend and contributor, R. James Wallace, when I visited him at Yerkes' observatory about the time of Labor Day, showed me some tests he had made of it, and remarked in his estimation the careful amateur would find it a capital plate for landscape work. So, when Mr. Cramer was showing me some of its results, I asked him why he did not give the amateur a chance to use it. He was surprised that I should make any such suggestion, since I knew it was so sensitive to all colors with the exception of the red from A to half way between B and C, and that therefore few could develop it without fogging. I thought and I still think that there are very, very many intelligent amateurs in this country who could develop a plate in almost perfect darkness, and so I have no hesitation in the interests of such in calling attention to the trichromatic plate.

Of course, I have lots of fun in St. Louis; that goes without saying. Every time I go there an effort is made to land me up against a new proposition which may range from a revivalist meeting to a synagogue. But one bit of fun never grows stale, at least with the perpetrator, "Papa" Cramer. Some years ago, after dinner in a convention town, some trouble arose over hats at the hat-rack and I remarked I never had any trouble over my head gear, as it was too big for anybody but myself to wear. Mr. Cramer was standing by, and the next instant his hat was endeavoring to repose itself on my ears while the upper, and I think most important, part of my head was lost to everybody's view. I pass by without comment the loud shout that went up, but from that day to this I never meet with Mr. Cramer without suffering eclipse, and always at some moment when I am especially endeavoring to be very serious. I often wonder if the time will ever come when some one with a bigger head than "Papa" will avenge me, or if I will have to go down to the grave without getting even.

F. DUNDAS TODD.

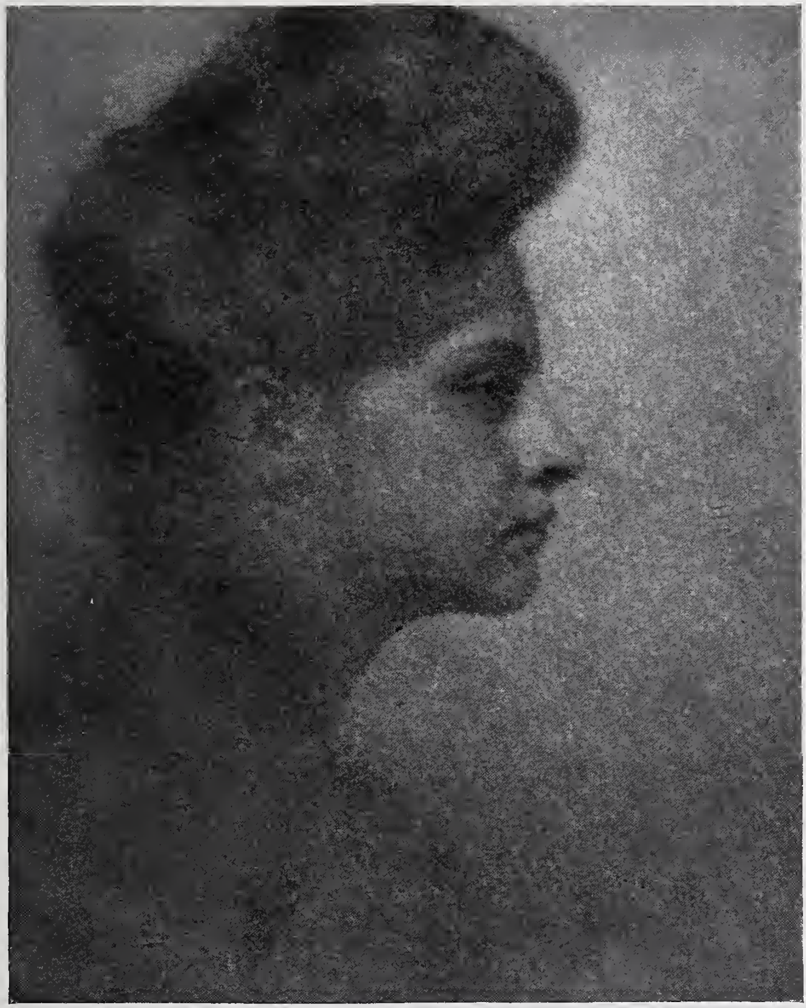
ADDRESS WANTED.

Prior to January 1, 1890, a gentleman, supposed to be named Mr. Todd, photographed a float at the Savin Yacht Club, in Dorchester, Massachusetts. One of the girls then on the float died shortly after. The relatives desire a copy of the picture. Anyone knowing of the event and the address of the photographer is earnestly requested to communicate with G. Kendrick Smith, 416 Marlborough street, Boston, Massachusetts.

PICTORIAL COMPETITION No. 65.

Not so many years ago the "at home" portraiture competition was one of the very worst of the year, and again and again I had to remark that the rendition of the human form divine was not the special forte of the amateur. Now things are changed, and the portraiture competition is, this year at least, both the most popular and the best.

Ordinarily three judges select the winning pictures, and in passing, let me remark I am wise enough not to be one of them, for I know if I did take part the unlucky participants would feel perfectly justified in laying all the blame on me. I am not looking for any more trouble than I have got; in fact, the less I have the better I like it. Well, this time it was evident that to select the winning pictures was to be no mean task, so I decided to try the effect of a multitude of judges and added a number of the members of the Chicago Society of Amateur Photographers to my list.



T. E. Bronson, Painted Post, N. Y.

FIRST PRIZE.

They wrestled with the problem for hours and by slow elimination arrived at the following awards:

First prize — F. E. Bronson, Painted Post, New York.

Second prize — Louis Fleckenstein, Faribault, Minnesota.

Third prize — A. W. Engel, 67 Wabash avenue, Chicago.

Special Mention — R. E. Berger, W. H. Evans, C. G. Hass (2), Mrs. Macadam.

Mention — Curtis Bell, R. E. Berger, Nellie Coutant, W. B. Cozzen (2), William J. Fredericks, D. J. Hays, Mrs. Jacquemin (2), Mrs. Macadam, A. H. Moberg, Mrs. Pearce, George T. Power, William S. Retch (2), John W. Schuler.

PARTICULARS OF WINNING PICTURES.

First prize — Taken with open stop of Collinear lens on Orthonon plate, exposure three seconds. Printed on Eastman Sepia paper.

Second prize — Made at 3 P.M. in July. Lower sash of window screened and a white sheet hung at back of sitter. Size of room 8 by 10. Taken with rear combination of Goerz lens at full aperture. Printed on Kallitype.

Third prize — Taken at 2 P.M. in June, 1-10 second exposure on Orthonon plate. Printed on Royal Bromid.

FUTURE COMPETITIONS.

Competition No. 67 — Landscapes. Closes November 30.

Competition No. 68 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second — Books to the value of $2.50.

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

TANK DEVELOPER FOR CRAMER PLATES.

STOCK SOLUTION.

Water	32	ounces
Carbonate of Soda (dry)	2	ounces
Sulphite of Soda (dry) according to desired color of negative	1 to 1½	ounces
Bromid of Ammonium	30	grains
Citric Acid	30	grains
Hydrochinon	1	dram
Glycin	2	drams
Metol	2	drams
Pyro	4	drams

Dissolve the chemicals in the given rotation.

To preserve the stock solution, we recommend filling the same into small bottles of the exact size, to hold just enough for making the diluted solution for the tank.

The bottles should be quite full and tightly corked.

FOR USE:

Water	120 ounces
Stock solution	6 ounces

The developer should be used fresh, and *its temperature kept between 60 and 65° F.*, until development is completed.

Immediately on immersing a plate in the tank solution, move the plate up and down with a quick motion, to prevent streaks and air-bells.

FILM, KODOID PLATE AND DEVELOPING COMPETITION.

The Eastman Kodak Company announce that they have made arrangements whereby American users of their products will be permitted to take part in the above competition which was organized by Kodak Ltd., London, England. There are $5,000 offered in cash prizes, and we feel certain the American amateur will make a strong endeavor to get the biggest share.

All interested should send at once to the Eastman Kodak Company, Rochester, New York, for a copy of the circular giving full particulars.

LECTURE ON LIGHTING.

(Given by Felix Raymer, Illinois College of Photography, Effingham, Illinois, before the New England Convention of Photographers, Boston, Mass., August 19, 20 and 21, 1903.)

Mr. President, Ladies and Gentlemen: It is my pleasure to come before you to-day, not as one knowing it all, for as I grow older, I realize how little I do know, but as one trying to aid some struggling brother craftsman, who perhaps has had an up-hill journey and will appreciate even the smallest suggestion made for his benefit. I am fully cognizant of the fact that there are many among you that are already as well posted in the various departments of our profession as your humble servant. On the other hand, after having

Louis Fleckenstein, SECOND PRIZE. Faribault, Minn.

examined the exhibits shown on your walls, I am equally sure that there are some among your number that could well afford to listen to all the suggestions made during this convention, and on going home let it be their endeavor to apply a few of them in their every-day work, and it is to this class that I expect to address my remarks.

It has been my observation, in traveling about the country for the past few years attending the different conventions, that one of the great troubles with the average worker is that he has not the fundamental principles of lighting thoroughly grounded in his professional education. By this I mean, that many of our workers can once in awhile secure a good result, but the very next attempt may be a flat failure, and many times the failures are in the majority by ten to one, or even more. Now this can only be accounted for by the operator not knowing just what he wants, or not knowing how to get what he does want. I believe the former supposition predominates.

What is portrait lighting? It is that which shows character, roundness, a lightness, action, expression, vigor, softness, mellow half-tones, all arranged by the operator in such a way that we pronounce him an artist. These requisites are just as essential in a correctly lighted portrait as the obeying of all the commandments. If we are guilty of losing one, we lose the whole. They are secured by the arrangement and management of our light, and just here is where I think operators differ so many times, and in fact I think it is a greater difference than any I know of. One says, I can not get that light to produce good results, or that is a poor light, and so on. But in my opinion it is not the light that is at fault, for that is only a hole cut in the side of the house, varying in size according to the size of the owner's pocketbook or ability to secure a smaller or larger opening. I think the trouble comes through the way this light or opening has been curtained. Now, one might say, "I haven't my light curtained at all." That may be your trouble; you should have it curtained. It is here that demonstrators experience their greatest trouble from the fact that the light they may be using at the time is curtained on an altogether different plan from that which they are in the habit of working. This being so, it will require a little consideration on their part to secure just the effect they want, owing to the fact that they must first learn the manner in which the direction of light is controlled. Now, you want to know what is that direction, and my answer is, that it is the direction that will secure character, roundness, a likeness, action, expression, vigor, softness and mellow half-tones, all blended into one grand whole. Personally, I have found that it matters not whether we use a small or large source of light, except in so far as the exposure of the plate is concerned, provided we have the light falling on the subject at the right angle, or from the right direction. Now, the next question is, what angie will produce the right direction. To elucidate, suppose we manage to close up all of our light except a very small opening, say about two feet square, directly over our subject's head, permitting the light to fall straight from above, and down on the subject. This light would be falling at an angle of ninety degrees and would give us a harsh, hard negative, lacking in expression, from the fact that the eyes would be in heavy shadow, and there would be heavy shadows under the nose and chin. Now we have lost softness, expression, roundness and good half-tones by this mode of lighting, and further have added several years to the appearance of our subject by giving such an emaciated look to the face. On the other hand, suppose we close off all the light, except a source of about two feet square directly at the side of the subject. This will strike the subject at an angle of ninety degrees from the side, which is the same degree, but will produce an entirely different effect. It will give one side of the face strongly illuminated, while the other will be in strong shadow and lacking in detail, which means harsh lighting again and a lack of gradations or half-tones. So we see that neither source will answer our purpose. Therefore, we must modify each and take the good points from both and drop out the bad points. We will cut down on the top light just enough to avoid the heavy shadows in the eyes, and at the same time cut out enough of the side light to do away with the sameness in the lighting on the light side of the face. After doing this, we find our light is falling neither from the side nor top, but midway between the two, or at an angle of forty-five degrees.

A. W. Engel. Chicago.

THIRD PRIZE.

There are other things that make this angle of light better for making portrait work, one of which I will mention here that is of the utmost importance, in my opinion, and is really the chief reason for my advocating this idea.

It is well known to all that use their eyes to see, that in every face there are two classes of lines, or wrinkles, as most people call them. There are the horizontal lines running across the forehead, and the "crow's feet" running horizontally away from the eyes. There are also the perpendicular lines or wrinkles, such as those running downward at the root of the nose, between the brows, and the deep furrow or character line running from the nose down to the corner of the mouth. If we were to use our light so that it all fell on the subject from the top, or at an angle of ninety degrees, it can be seen that the light would fall across the horizontal lines, or those running across the forehead, and make them appear deeper than they are in nature, thus adding to the age of the person. At the same time, the lines running perpendicularly through the face would be filled with light and obliterated perhaps, which we know would not be right. Our idea should be to modify these lines, but not obliterate.

Again, if we should use the light falling straight from the side on the subject, it would fall across the perpendicular lines and exaggerate them, and would fill the horizontal lines with light, obliterating them. So we see from these remarks that neither source of light would be best for our work. That which we should do would be to use our light so that we secure the best effects, and these effects have been more pleasing to my mind, when both classes of lines in the face have been preserved, but modified.

We operators have for a number of years surrounded ourselves with a great air of mystery, and said if one wanted to become a good operator it had to be born in him, and I believe yet that one must have a taste for the work, but I have two propositions to lay before you to-day, and these two propositions comprise but two moves in the operating-room. They are these: First, the distance from the light to the subject will regulate the direction the light takes in falling on the subject, whether it be at an angle of forty-five degrees or not. The further away from the light the subject is posed the lower down on the side the light falls. The closer to the light the subject is moved the higher the light falls, until it will at last become all top light. Now, for the second move. The distance from the end of the light toward the center of the light regulates the effect of the lighting, whether it be a soft or a strong lighting. The nearer one end of the light the subject is placed the softer the effect. The further under the center of the light the stronger the effect.

In portrait work we should make it our aim to have certain parts brought prominently to our notice in the picture, while there should be certain other parts that should be subordinated. I will mention and demonstrate one instance. The ear and outline of the head on the light side of the figure should not be so strongly lighted as the more central parts of the face. If they are, the attention will be distracted from that which is of more importance to that of lesser importance. Therefore, we must use a screen for screening the ear locally, some small hand-screen answering nicely. But in using it, do so in such a way that the finished print does not show that it was necessary to use it. The idea should be to get the effect of the screen without showing that it was used. It is just here where we operators are many times criticized, and justly so, by our artist friends. It is too often the case, where it is necessary for us to do some "faking," as it is called, that we show too plainly that "faking" was done. In other words, we overdid it to such an extent that it was apparent in the finished picture. Adhere to nature, and I can not conceive of a face lighted in such a way that on the light side there would be a great, broad "smudge" of black extending from the temple down to the chin. [Applause.] Shadow is just as important in the lighting of a face as light, but it must be carefully used, and at all times should be transparent, showing the flesh tints or tone values through it.

I am often asked if I believe in using a reflector on the shadow side of the face. I do, most emphatically, if I need it. There are times when the use of reflected light would spoil the lighting on the face. But there are other times when it is a positive necessity. In using the reflector it should be done as though it was a continuation of the sky light, allowing it to begin affecting the face at the point where the direct light leaves off, and continue the lighting around the entire head in one even blending, getting less in its effect as it continues toward the back of the head. There should never be a time when there is a shadowy line formed between the direct light and the reflected light, for if such is the case it will cause unlimited amount of retouching to join the two sources of light in one even blending. The lighting must be balanced, that is, the shadows must be blended into the high lights, showing gradations and mellow half-tones running from the highest light down to the deepest shadow, and if it is necessary to use a reflector to secure this result, by all means use the reflector.

When such a lighting has been secured, under the light, it is a much easier matter to develop the negative. I have heard certain demonstrators claim that their plate will stand more abuse, or in other words, carelessness than any other plate, and for that reason one does not have to be so careful in getting the lighting rightly balanced. This, to my mind, is the lowest class of claim to be made for any brand of goods, and I for one will never use the goods of one appealing to the careless side of a man's nature. "What is worth doing at all is worth doing well." Therefore, have your light balanced as well as is within your power.

In developing such a lighting as we have demonstrated and described, have

Mrs. M. B. Macadam, New York.

it divided in your mind's eye into at least three ranges of high lights. Let them be known as Nos. 1, 2 and 3, No. 1 being the highest, No. 2 next and No. 3 the lowest. Develop the negative until high light No. 1 has gone down through the emulsion and rests on the glass; there you stop developing, for to carry it further would only carry high light No. 2 down to the glass, and then you would have but two high lights of varying strength, and if you were to take high light No. 3 down to the glass, you would have but one high light, from the fact that all high lights were resting on the glass and of the same intensity. It is not possible, by prolonged development, to send high light No. 1 through the glass, so do not try it. All you will accomplish will be to cause halation of the high lights, running one into the other and spreading them along the glass until all are of the same density. It is this spreading of the high lights that causes halation when we photograph a room facing toward a window. Owing to our being unable to balance the shadows with the window, we must prolong development until we secure detail in the shadows, and in doing so spread the light from the window along the glass, forming halation. Were we to stop developing as soon as the high light from the window struck the glass, we would not have halation; but, owing, as I said before, to the fact of our being unable to balance the shadows with the light, we must develop until detail is secured in them, hence the halation. It is for just this reason that we have double-coated plates. The first coating is a slow emulsion, the next a faster; when development is taking place the high light from the window passes down through the fast emulsion and is caught in the slow one until the shadows have a chance to get through the fast emulsion. Thus it will be seen that the highest light, being caught in the slow emulsion, and not being permitted to spread along glass, will avoid halation. [Applause.] It is the same with your ordinary plate. Prevent the spreading of high lights along the glass, and you will secure the gradations of light as you saw them under the light. But be certain you have your light balanced and you will experience no trouble in developing as I have directed.

Your first trial of the method I mention may result in prints with "smutty" shadows. If this is so, do not develop further, but reduce the amount of sulphite of soda in your developer, and thus secure more yellow in the negative, which will preserve the high lights and shadows without clogging them up. The quality of your negative has more to do with the getting of brilliant prints than the overdeveloping of it. The finer the grain of the negative the more brilliant the print, from the fact that it only allows light to pass through those parts that are intended to pass light. To illustrate: Suppose we have a large sieve in which we place a layer of stones the size of one's fist. Now place a large light under this sieve and look through it toward the light. We can see considerable light passing between the stones. Remove the stones and place a layer of gravel the size of a cherry, look through — there is less light passes the gravel than the stones. Now replace the gravel with a layer of sand and look through. There is no light passes the sand. So it should be with your negative, in a measure. Control the amount of light passing through the high lights, we will say, by the quality of it.

I was once told by an operator friend that the method I use in developing would not work for him. I asked why. He said, "the negatives were too thin." I asked why he did not reduce the sulphite of soda, as I directed. He said, "Oh, I forgot that." Now, do not any of you forget it, for it all rests on that one thing.

I will give you the formula I use for my work, and any that may wish can give it a trial.

No. 1, carbonate potassium to test 40.

No. 2, sulphite soda test 70.

No. 3, water 24 ounces, oxalic acid 15 grains, pyro 1 ounce.

To develop, take one ounce each to eight ounces water.

In winter use carbonate potassium

for No. 1, but in the summer I use carbonate soda.

If more color is wanted in the negative, reduce the test of No. 2 until desired result is secured.

Ladies and gentlemen, I thank you for your kind attention. [Applause.]

HOW TO MAKE AN ELECTRIC DARK ROOM LAMP AND ENLARGING LANTERN.

The lamp I am about to describe was designed for use with city power, but it can be just as easily adapted to a current from a series of batteries, several good methods for constructing which have appeared in your journal from time to time in the last few years.

The lamp itself consists of a wooden box with a sliding cover. I used a Kingsford's five-pound starch box, which answered admirably. First, cut a rectangular opening in the cover, say 4 by 5 inches horizontally. On each side of the cover paste over the opening a sheet of ruby paper which may be purchased at any photographic store. Now, bore a small hole in the center of the top of the box for the insertion of the wire. After the wire has been inserted and the hole plugged, cover both the box and the cover with black oilcloth or some other opaque material.

Allow a flap from the top piece to hang down over the cover, when it is closed, so as to prevent light from escaping between the box proper and the cover. Next procure an ordinary enclosed switch at an electric supply house and attach this by cutting one wire about an inch from the top of the box and inserting each end of the wire in a binding post of the switch. The switch may be now screwed fast to the box and the incandescent lamp screwed in. Line the inside with white paper or paint with white enamel.

Now, take a piece of your opaque material, say 5 by 6, and cut an aperture in the center of it of 2 by 3 inches. Then paste this piece by the bottom only over the outside opening in the cover of the box. Catch it at the top by small brads in such a manner that it may easily be slipped off and allowed to fall down. Now, take a piece of white cardboard, about 5 by 6 inches, and hinge it to the box cover about half an inch above the flap. Allow the brads that hold up the aforesaid flap to project about half an inch, so as to form a rest for this hinged shield. By this method you have a shield to cast the light upon your developing tray and also have two openings which provide two strengths of light, the smaller to be used when developing plates and the larger when bromid paper is employed.

Withdraw the sliding cover and you have an excellent light for printing Velox or other developing papers, and at any time during the process of development you may turn off the light to protect your plate from fog.

The whole thing is now complete and should look something like Fig. 1.

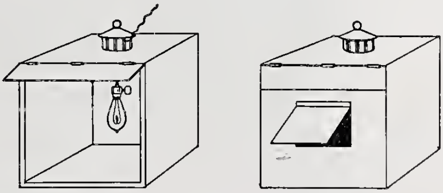


Fig. 1.

Procure another box of the same kind and we will proceed to turn our lamp into an enlarging lantern. These directions are for a 4 by 5 camera, which is about the largest that can be conveniently employed in this way, since the diffusion of the light in the larger sizes is a difficulty not easily overcome.

The cover of the new box is all that is required, and before proceeding, be sure that it fits easily yet snugly in the other box.

Now, cut a 4 by 5 opening in this cover also, but have it vertical. A tube must now be made about 5 inches long to fit into this opening. This tube may either be constructed of cardboard or wood. The former is the easier, but the latter more durable. In either case the edges must be covered with the black paper which comes around plates and film. This tube may now be inserted in the opening in the cover, allowing it to be flush with the inside surface of the same. These edges may also be bound with black paper to exclude light. The opening on the inside of the cover must now be covered with several thicknesses of tissue paper or a sheet of ground glass may be inserted. Now, on each side of the tube, about 2 inches from the cover, make a slit about the thickness of a plate and in both top and bottom on the inside paste a couple of narrow strips, to make a groove for the plate to slide in. These slits may be covered after the plate is inserted by a half-inch rubber band. Now, take strips about an inch in width, two each of the length and width of your camera. Fasten these upright on a bottom the size of your camera back, thus making a shallow box. In the bottom of this box cut an opening the size of the above-mentioned tube. The farther extremity of the tube should be inserted in this opening, so as to project about three-eighths of an inch. This piece should be lined with felt or soft cloth, if it does not fit the camera snugly. In operation the camera may be placed on books or boxes until a proper height is reached.

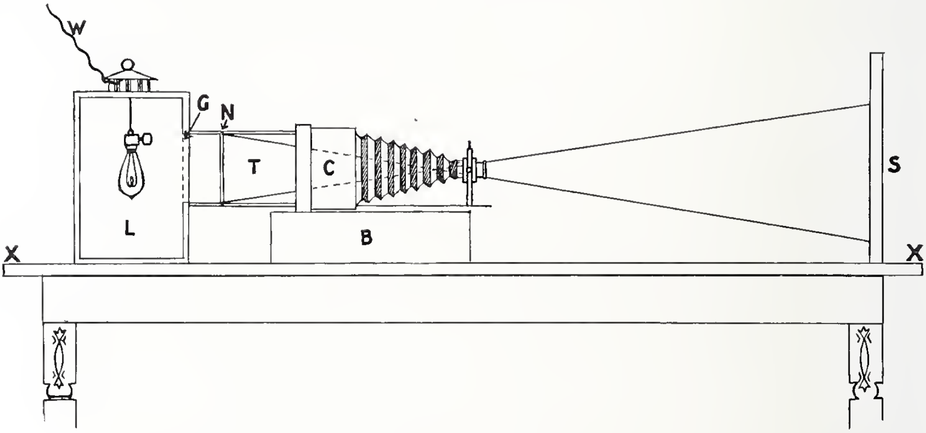


Fig. 2.

J. L. Meyers.

The advertisement of the Voigtlander & Son Optical Company in this issue is deserving of a more than passing notice, as it shows a group containing no less than 683 heads.

PHOTOGRAPHIC BAS-RELIEFS.

A novel, curious and interesting effect, which closely resembles a sculpture in low relief, can be obtained as follows:

Place a negative and a positive plate of the same subject glass to glass (with the films in each case outside), in a printing-frame, and print deeply and for a long time with ordinary P. O. P.

Take care that the two plates are as nearly as possible in register, and if you desire to accentuate a high light, you can easily do so by placing the positive and negative slightly out of register.

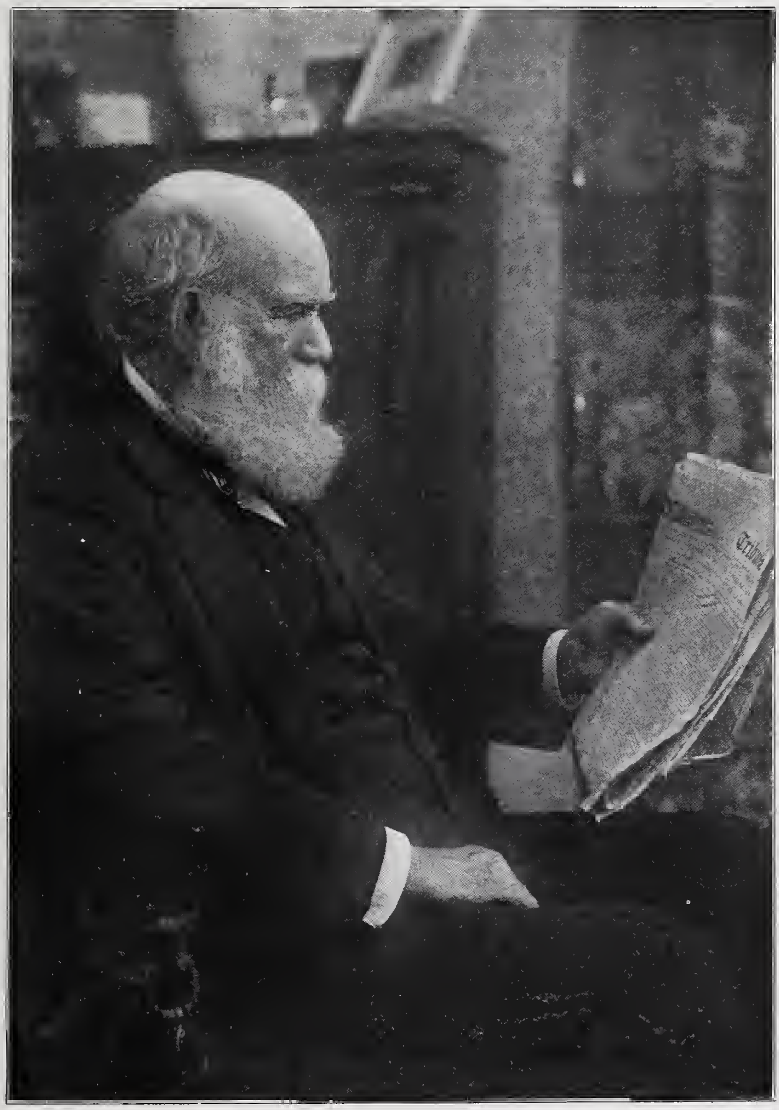
By holding them both up to a window and letting the light come through, you can without any difficulty judge the effect which you may wish to obtain.

One would naturally suppose that by printing with a perfectly exact register the resulting print would be nil, as the negative and positive, the complements of one another, would be so contradictory that the print would turn out a smudged piece of white paper. However, this is not so, and it will greatly surprise you that, instead of a dead-flat result, you will obtain what looks like a photograph of a plaster of paris bas-relief, standing out stereoscopically.

Try yet another experiment, and place the negative and positive in your printing-frame film to film (with the glass sides of both, of course, on the outside), and, having printed, you will discover you have got, not a bas-relief, but an in-cut picture, like a cameo seal used for sealing letters with sealing-wax, which is quite the reverse to the picture obtained by printing with the films of the positive and negative on the outside.

I have only experimented with 4 by 5 figure studies, and, on showing some results to several of my friends, most excellent technical workers, not one could discover how it was done, and the various "shots" to unravel the mystery were most amusing, if not edifying.

A stone-gray color can be obtained in the prints by using an almost worn-out combined toning and fixing bath, and leaving the prints in it for a considerable time.



Wm. S. Ritch, Richmond Hill, N. Y.

FLASH-LIGHT.

To what practical purposes this method of printing can be applied I leave to each individual reader of this journal, but the simplicity of the experiment commends itself, and I feel sure the result will come as a surprise.

I ought to mention that the film of the negative should be on the outside of the frame nearest to the light, which should pass through it first.—*Amateur Photographer.* H. VIVIAN YEO.

MORE EXPERIENCES.

Here are some more experiences and a wrinkle for the benefit of Photo-Beaconites. Those prints I worried about in the September issue, I am convinced were discolored by mud, just mud. The stains were on the back of the paper, and I found out the water mains in my section had had a flushing at that time and that others were saying things about the muddy water. The silt was so fine a 2½-inch quartz filter would not stop it, and so the prints were ruined.

Another experience, a recent one, was with damp plates. We went camping and about the time we went into camp Jupiter Pluvius joined us. There were three days of rain and fog. Five cameras were in the party — two film and three plate. We noticed the cameras had swelled a little in the closet where they were kept, and when we got home found a poor lot of negatives. They were thinner than a starved greyhound. Plates were Stanley's, Wuestner, American and Lovell, and the film was Eastman. Some of the negatives were mottled as if they had a sort of black measles, and all were "measly" things, except one or two which were exposed early and one I carried up fresh one day and used at once. In so many different hands and under such varied conditions and exposures it could not have well been anything but dampness which caused our trouble. I recall one in which my better three-quarters posed as a snake charmer. With a *dry* plate 1-25 second, 16 stop, ought to have done it; but about all we found on the plate was a pair of fists holding sections of a snake, while the rest of the reptile and Mrs. D's head and shoulders were mere suggestions. It was a good salon picture, as it left lots to the imagination.

Now for the wrinkle. We all know how voracious a camera can be in the matter of plates, and a lot of kits cost money, too, if many sizes are desired. But a bit of gumption and perhaps 10 cents worth of stock — no, less than that — will give any one all they want.

First, accumulate some cardboard — old boxes or anything like that. Stick it together to the average thickness of a plate — a dry one; not the dinner kind. Trim it carefully to fit your plateholders, 5 by 7, 4 by 5 or any old size. Then, with it in the holder, mark off from the center the size of hole required, say 2½ by 2½, 3¼ by 3¼ or 4¼ by 4¼. Cut on the lines with a sharp knife, an old shoe knife is fine for it. Cut clear through and you have a nice clean hole. Get a strip of thin brass, ½ by 6 inches, from some stencil-cutter, or use thin tin from the top of one of these "open this end" cans. Flatten it and trim out some "buttons," with a pair of scissors, but do not let your wife know about it. Lay the button on the end of a piece of hardwood, tap a wire nail lightly where the hole is wanted, and file off the burr raised on the under side. Get a couple of dozen "lasting tacks" from some cobbler, drive one through the button and cardboard, and, putting the head on the face of a flat-iron, when your wife isn't about, turn the point over into the card by carefully tapping it with a light hammer. Do not pound too hard, or the button will bind. Now, put a button on the other side of the hole similarly, and then turn the kit over and on diagonally opposite corners tack a little bit of metal to prevent the plate dropping through, and there you have a kit costing for stock perhaps 1-18 of a cent. Paint it over with marking ink, if you feel well enough acquainted with the shipping-clerk, or use ordinary ink if you do not, and the kit is done and only needs a trial to prove it is just as good as the 20-cent and 25-cent kind that warp in dog days. CHARLES M. DOTEN.

HANDLING GAS-LIGHT PAPERS.

Having read "A Help in Printing," by "E. D. G.," in the September Photo-Beacon, I am led to give my methods as being, I think, better in many ways.

First, if the print is held in the clips during development it will surely leave a mark, if the background is dark. It also requires more time and trouble to handle several sets of clips and keep track of them, aside from being clumsy.

I keep a soft dry cloth (old, knit underwear) beside my developing shelf to dry my fingers on, and use the stems of burned matches, with the charcoal rubbed off, to lift the prints with. Six ounces of developer (I use Metol) in a 5½ by 8½ tray is the proper amount, and with a little practice one can plunge the print (unless very small) entirely under the solution without wetting the fingers. This is done with the left hand, holding the match in the right, and if print is not fully immersed it is gently pressed under with the burned end of the match, while the tray is rocked with the left hand. When print is developed, I lift the far right-hand corner with the match, and take the corner between thumb and finger of left hand and dip print and fingers in clear water, which sets to the left, several times. It is then passed on into the fixing tray and "eased" down into the hypo till the fingers almost dip and let go.

W. H. Evans, Plainsville, Pa.

I allow the end of fixing tray to project over edge of shelf an inch or so, so it can be rocked with the knuckles without taking hold of it. After each print is made the fingers are dried on the cloth.

Thus I make fifty or even hundreds of prints without the necessity of washing hands, and am never troubled with fingermarks nor the effects of the Metol, by simply changing rinse water occasionally and match stems, and perhaps the cloth. I would add: Always keep paper face down until printed, to avoid dust, specks and light.

C. E. PLEAS.

THE ACTION OF AMMONIUM PERSULPHATE ON THE PHOTOGRAPHIC IMAGE.

The question has often been discussed whether the reducing action of persulphate of ammonia is most vigorous in the densest parts of the negative, while having less effect on the thin portions of the image, or whether the dense and thin parts of the negative are equally reduced. The advocates of persulphate of ammonia claim that a harsh negative can be softened by reduction in ammonium persulphate, but several writers have disputed this theory, and endeavored to prove that the gradation of the image remains unaltered by the persulphate.

Of course, when a negative is reduced by the ordinary methods, ferricyanid of potash and hypo, or the cyanid of potash and iodin reducer that is used by wet-plate workers, the thinner portions of the image disappear almost before the solution has begun to act on the densest parts of the plate. In consequence of this effect of these reducers, they can not be used for negatives that have the least tendency to hardness.

It occurred to the writer that the question of the actual amount of reduction, both in the dense and weak portions of the image, that takes place in the silver deposit, might easily be determined by observing the action of the various reducers on the silver granules through the microscope. A half-tone screen negative (wet plate) was selected for the purpose, as with a screen negative it is easy to secure a comparatively large portion of film, in which the half-tone "dots" are of exactly the same size, shape and density over all the surface of the film that is used for investigation. The "dots" of the screen negative vary in density from opacity in the center to a few isolated grains of silver at the edges, and this feature of the half-tone negative made it eminently suitable for studying the comparative reduction of both the dense and thin portions of the silver deposit. A comparatively high power is required to render the structure of the silver deposit plainly visible; in this case a ⅛-inch objective was used for both observation and photographic purposes. The effects of the various reducing agents are given in Figs. I to IV; in each case a group of four dots were photographed, and in all portions of the film used for investigation the "dots" before reduction were identical in size and density.

The first illustration (Fig. 1) is from a photomicrograph of the "dots" as they appeared after development, and before being reduced. It will be noticed that in the middle of each "dot" there are several opaque patches, but round the edges and in the space between the dots only isolated granules are to be seen. The dots in this photograph, as in all the other illustrations, have been magnified 250 diameters. Fig. II shows the appearance of the dots after reduction by ferricyanid of potash and hypo. The film remained in the reducer for four minutes. The photograph gives the results that would be expected by those who are familiar with the action of the ferri-hypo reducer. The dense deposit in the center of each dot remains practically unaffected, while the isolated granules of silver at the edges have all been removed.

The illustration proves that the reducer acts on the weak portions of the negative with far greater rapidity than on the denser parts, and explains the "hardening" effect of this reducer on the photographic image.

Fig. III is a photograph of a portion of the film after partial reduction by cyanid of potash and iodin. This method is in general use with wet-plate workers, and for wet collodion negatives it is a beautifully clean and reliable reducer. In this case the reduction was not carried so far as with the ferricyanid and hypo-reduced film (Fig. II) in order that the photograph could be taken before the isolated granules had been entirely removed. It will be seen that the action of this reducer on the image is exactly the same as that of the ferricyanid solution, the dense parts of the silver deposit are unaltered, while the scattered grains of silver have nearly all disappeared. Fig. IV is a photomicrograph of a portion of film reduced by ammonium persulphate. It will be seen at once what a great difference there is in the action of persulphate of ammonia on the silver granules as compared with the other reducing agents. In this case the center of each dot has become permeable to light, and there are no opaque patches left as in Figs. II and III. The isolated grains of silver surrounding the dots have become smaller, but are not reduced in number. It is evident from the small size of the granules in the center of the dot as compared with the size of the scattered particles at the edges that the most vigorous action of the reducer has occurred in the densest parts of the

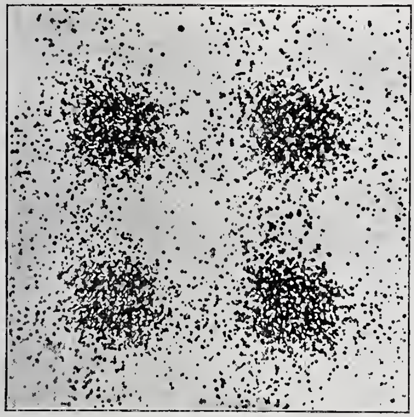


Fig. I. × 250.
Photomicrograph of half-tone screen negative before reduction.

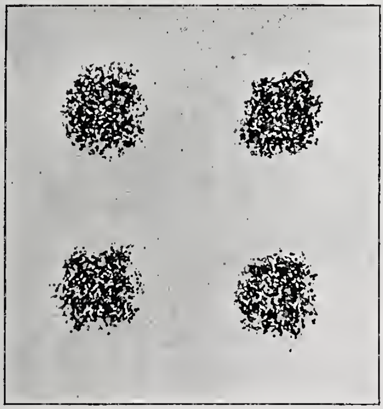


Fig. II. × 250.
Photomicrograph of negative after reduction by ferricyanid of potash and hypo.

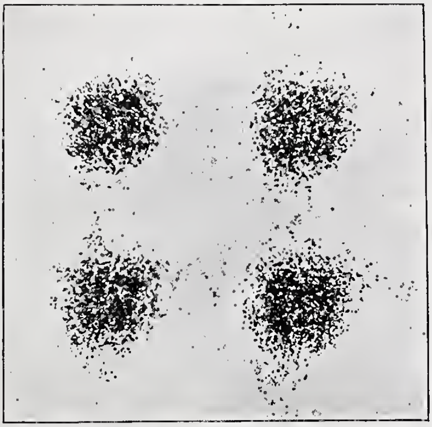


Fig. III. × 250.
Photomicrograph of negative after (partial) reduction by cyanid of potash and iodin.

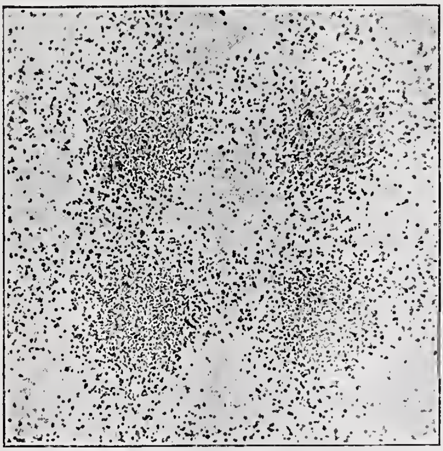


Fig. IV. × 250.
Photomicrograph of negative after reduction by ammonium persulphate.

image, although, of course, reduction has taken place all over the film. In all the "dots" of the portion of film reduced by ammonium persulphate that were examined under the microscope the reduction was greatest in the densest parts.

In order to give a still further test of the ability of isolated granules to withstand the action of the persulphate, a piece of film was reduced till the silver had been nearly all removed from the collodion, but as long as any portion of the center of the dots remained the isolated grains were to be found round the edges.

There can be no question that denser portions of the negative are more susceptible to the action of ammonium persulphate than the thinner parts of the image. When a film reduced by ammonium persulphate is examined under the microscope it is evident that besides reducing the size of the silver grains the chemical has altered the character of the deposit. The silver granules, after reduction by ferricyanid-hypo or cyanid-iodin, remain opaque, but with the ammonium persulphate reducer the granules become opalescent. This effect on the silver granules of the persulphate must have the result of still further increasing its power of reducing hardness in negatives. The reducing action of ammonium persulphate is very much slower than that of ferricyanid and hypo or pot. cyanid and iodin. Although the film was immersed in a saturated solution of persulphate, the time required for the reduction of Fig. IV was three times that given in Fig. I.—*British Journal of Photography.*

J. I. Pigg.

PREVENTION OF AIR-BUBBLES ON PLATES.

The formation of air-bubbles upon a plate under development is such a frequent cause of annoyance that a simple expedient for preventing them may be welcomed by some of your readers.

Since this expedient first suggested itself to me a number of years ago, I have never omitted to use it in developing, and during that time have not had an air-bubble to form upon a plate.

The treatment consists merely in breathing upon the plate with a slow and full exhalation immediately before wetting it with the developer.

The cold plate when breathed upon condenses an invisible coat of moisture upon itself from the warm breath, and this invisible dew predisposes the film to receive an aqueous solution evenly over its entire surface, the imperceptible coat of dew acting as a conductor to guide the developer in an unbroken flow over the plate. Those places on the film which, by resisting the developer and remaining coated with a layer of air, produce air-bubbles, as well as those "greasy" places that sometimes occur on plates, will each receive the developer as readily as any other part, each having condensed the breath's moisture upon itself in an equal degree with the rest of the surface.

While breathed upon, the plate should be exactly horizontal, and within two or three inches of the open mouth, care being taken to go with regularity over the entire surface at least twice, not neglecting the edges and corners.

The oftener the plate is gone over in this way, the heavier, naturally, will be the deposit of dew, unless continued until the surface of the plate becomes so tempered by the warmth that condensation will practically cease.

If the plate were held vertically when breathed upon, the breath rising by its own warmth, only a limited amount would reach the plate, particularly its lower part.

In cold weather a plate needs to be breathed upon longer than in moderate weather, because in cold air the breath is more rapidly cooled in its transit between mouth and plate. In very cold weather to go over the plate five or six times has been my practice.

Also in hot weather, the breathing should be continued longer than in moderate weather, the plate being then not sufficiently cooler than the breath to produce condensation rapidly. In hot weather I go over a plate three or four times.

M. C. Booth.

THE CHEMISTRY OF SOME PRINTING PROCESSES.

In this article I propose treating of the chemical aspect of the principal printing processes, premising my remarks by the statement that these brief notes are not in any sense exhaustive, and do not profess to do more than describe in barest outline the chemical changes which take part in the production of the finished photographic print, being written in the hope that by arousing the reader's interest in the question, they may induce him to read some of the many excellent works which deal with the matter as fully as the present state of our knowledge renders possible, when I think he will find that chemistry, at any rate, if studied in connection with such a fascinating pastime as photography, is by no means the dry subject which he may have been led to expect.

Chas. Haas, New York.

In spite of the fact that albumen paper is now rarely used by the amateur, there can be little doubt that it has the first claim to our notice, not only on account of it being one of the oldest silver printing papers, and previous to the introduction of the familiar P. O. P. (gelatino-chlorid paper) in almost universal use, but because once in possession of a knowledge of the chemistry of this particular process, we shall be in a better position to understand the somewhat similar changes which take place when printing with any of the newer and now more generally employed silver papers. The method of preparation consists in coating a suitable paper — that known as Saxe and Rive being usually selected for large and small pictures respectively — with a solution of albumen in the form of white of egg, containing chlorid of ammonium, and drying.

This "salted" paper, as it is called, on account of the ammonium chlorid or salt it contains, is next sensitized by floating upon a solution of nitrate of silver for a few minutes, and again drying — of course, in non-actinic light. At this stage the film of our paper contains (*a*) chlorid of silver, formed by the action of the ammonium-chlorid upon a portion of the silver nitrate; (*b*) albuminate of silver, formed from the albumen and another portion of the silver nitrate; (*c*) free silver nitrate, of which excess, for a reason that will presently appear, is always used.

When a paper prepared in this manner is exposed to light, the silver chlorid is reduced to a subsalt of silver, the exact nature of which, in common with that of the reduction products of other salts of silver formed under the influence of light, still remains unsettled, but it is interesting to note that Carey Lea succeeded in producing by purely chemical means colored salts of silver that were apparently identical with those formed by the action of light, and to these he gave the general name of photo-salts.

When normal silver chlorid is reduced to photo-chlorid, chlorin is at the same time liberated, and immediately absorbed by free silver nitrate in the film, with the formation of more chlorid of silver, and it is on account of this chlorin-absorbing power that in preparing the paper care is always taken to see that excess of silver nitrate is employed.

The albuminate of silver, too, undergoes reduction during exposure, though in proportion to that which takes place in the case of the chlorid, the amount of such reduction may be small, especially if the light employed in printing is not very active.

The image at time of removal of print from printing-frame consists of the reduction products of the chlorid and albuminate of silver, in addition to which the film still contains much unaltered chlorid and albuminate of silver.

If at this stage we were to fix our print, the image would have a disagreeable red color, and to avoid this we resort to what is known as "toning."

Toning consists essentially in the precipitation of metallic gold upon the preexisting image, and is effected by placing the print in a neutral solution of chlorid of gold, phosphate, acetate, carbonate, or borate of soda (borax) being also added.

Some compounds and elements may occur in two or more forms, differing considerably in color or other physical characteristics, while being chemically identical. We may mention as a striking example of a substance possessing this dual nature, mercuric iodid, which normally is a brilliant scarlet, changing when heated to a bright yellow, the scarlet color returning when pressure is applied, as for instance by running the finger-nail over a thin layer placed on a slab — the difference in color probably being due to a change in crystalline shape. Gold, too, is an element capable of assuming either of two distinct forms, when a solution of auric chlorid is reduced, and in toning it is necessary to bear this in mind. If the metal is precipitated slowly from its solution, the resulting metal is red, but if deposition proceeds rapidly, it is blue in color, and as it is this blue form of gold we want upon our image, care must be taken to see that the toning bath is kept free from any substance exercising a restraining influence over the deposition of the metal, such, for instance, as free hydrochloric acid, and to insure the presence of some chlorin-absorbing body, such as acetate, carbonate, or phosphate of soda, when the resulting chlorin salt is not only harmless but beneficial, converting any unchanged albuminate of silver into chlorid, which is afterward removed in fixing.

It is equally important that, with the exception of the reduction products of the silver salts which constitute the photographic image, the toning bath should contain no reducing substance, as the slightest trace, say, of hypo, would (in addition to giving rise to an insoluble thiosulphate of silver, which at a later stage would result in the formation of stains of sulphid of silver) react directly with the chlorid of gold, and prevent precipitation of metallic gold upon the image.

During toning, too, probably some of the colored subchlorid of silver is rechlorinated, that is, converted into white chlorid of silver, hence the loss of density which occurs during this operation.

At time of removal of print from toning bath the image consists of reduced chlorid and albuminate of silver, with a coating of metallic gold, the film also containing white chlorid of silver and unchanged albuminate. The next step is to fix the image, which is done by placing the print, after washing, in a solution of hypo, when the white silver chlorid is wholly and the subchlorid partially converted into a soluble double hyposulphite of silver and sodium, the conversion of the colored subchlorid being accompanied by the liberation of some metallic silver, after which nothing further is required, except the removal of these soluble salts by a final washing.

Mention has previously been made of the fact that after being in use for a little time the toning bath may become acid, and should this occur it is absolutely necessary that the prints be well washed before being put into the fixing bath, otherwise a little hydrochloric acid is carried over, and this decomposes some of the hypo, sulphurous acid being formed and sulphur liberated, which results in gradual bleaching of the image, the whites acquiring a yellow color, due to formation of sulphid of silver.

With the idea of preventing the possibility of this, Abney recommends the use of sulphite instead of hyposulphite of soda as a fixing agent for prints, as if an acid be introduced the sulphite gives rise to sulphurous acid but no free sulphur. The remedy is certainly effective, but with ordinary care hypo is usually found perfectly satisfactory.

Before leaving this part of my subject I may briefly refer to the use of a "combined bath," that is, a bath containing chlorid of gold and hyposulphite of soda, in which the print is toned and fixed at one operation.

The chief objection to this method is the variable action of the bath. When first used, gold is deposited satisfactorily, but later toning is due partly, sometimes principally, to sulphur, probably derived from the breaking down of one of the higher thionates of soda, an unstable sulphur salt formed together with a double thiosulphate of gold and sodium, when solutions of gold chlorid and hypo are mixed.

Sulphur toning has much the same appearance as gold, and was once largely employed, but its permanency is not so reliable, hence to insure that toning is due to gold it is advisable to tone and fix separately.

P.O.P. or gelatino-citro-chlorid paper is prepared by sizing paper with starch or gelatin and sulphate of barium, and then coating with an emulsion containing chlorid and citrate of silver.

When exposed to light the white silver chlorid is reduced to colored subchlorid, as in the case of albumen paper, the chlorin being absorbed by the citrate of silver, with formation of more silver chlorid, the organic acid imparting that vigor to the image which a haloid salt alone is unable to give.

The image so obtained may be toned with any of the baths used for albumen paper, but the one most frequently employed consists of chlorid of gold and ammonium sulphocyanate, the latter combining with the chlorin liberated when the gold chlorid is reduced.

Fixing is performed in the usual way with hypo, followed by subsequent washing, the finished print having an image composed of metallic silver, together with the reduction products of the organic silver salt, and a variable amount of gold.—*The Amateur Photographer.* WALTER C. MARSHALL.

CLOUDS.

A landscape picture is incomplete without clouds, it looks out of balance.

There are two methods of producing clouds in a picture — by photographing the clouds with the landscape, and by printing in from a cloud negative.

The first is the easiest and most simple. The latter requires several cloud negatives and requires stopping out the sky part of the negative, unless it be so dense it will not print, then stopping out the landscape so it will not print when printing in the clouds from the cloud negative. This is done by painting the glass side of the negative, where you do not want it to print, with some opaque substance. Unless carefully done, it is sure to show it has been doctored and is worse than if left without clouds.

I prefer to use a frame or tray with a glass bottom that just fits over the printing-frame. Put some sand in this and place over the printing-frame in which is the negative of the picture you are going to print your clouds from. Use no back to the frame containing your negative, so that you can see through the negative; now carefully with the finger cover the sky with the sand up to the sky line and getting none on the landscape part of the negative. Now carefully lift off the tray of sand, place the printing-paper in the frame and replace the tray of sand on it and proceed to print. Be sure to place the negative close to one side and one end of the printing-frame when placing the sand, also the same way when putting the paper in, so as to have it register right.

When done, stop out the landscape part of the negative you have printed with the sand, being careful not to go beyond the sky line, place the cloud negative in the frame and print in your clouds.

In selecting your cloud negative, be careful to get one that is suitable for the landscape — one that has the source of light coming from the same direction as it does in the landscape.

Do not get storm clouds when you should have light, scattering ones.

This process requires considerable skill or it will show the sky line. It also requires several cloud negatives.

Another way to get clouds is by reduction. Use Farmer's reducer or persulphate of ammonia and reduce the sky part only. This will generally bring out the clouds if there are any, but unless carefully done it will leave a line where reduction stops.

The best method I have used and one that gives the best result is to take a piece of brass tubing, pasteboard box or roll some paper and glue it so as to make a paper tube that fits the lens the same as a cap would. It should be about 1 inch long. About ¼ inch from one end saw or cut a slot two-thirds the depth of the tube 1-16 inch wide, the same as if you were going to cut ¼ inch off the end of the tube with a saw 1-16 inch wide, but stop when two-thirds through.

Slip this on the lens front before focusing; after focusing, take a card or piece of stiff paper, fold it double but do not crease the fold. Leave it so it will have a tendency to spread apart at the two ends into the shape of a V. Now, looking on the ground-glass, push the card in the slot in the tube up to the sky line. If the sky line is broken, cut or tear notches in the card to relieve the object or objects roughly — that is, they do not have to be very exact.

The card being doubled in the form of a V will have a tendency to spread apart at the two ends. This will wedge it so it will remain where you place it.

When this is done, close the shutter, put the plateholder in place and make the exposure. When the exposure is eight-tenths or nine-tenths made, remove the card, thus giving the sky or water, as the case may be, one or two tenths exposure, which is the right proportion to a landscape exposure.

An Iso plate of slow speed is best.

I have also had very good success by making a short exposure with a lens cap, using no shutter. Select a stop and plate which will require an exposure of about one second. In making the exposure uncap the lens with an upward stroke of the hand and capping it again with a downward motion of the hand, thus giving the sky the least exposure.

W. MARSHALL.

AMATEUR PHOTOGRAPHY AS A MEANS OF EDUCATION AND CULTURE.

How can we account for the fact that it is so difficult to discover in nature anything which viewed by an eye, even a little artistically educated, is unsymmetrical or ugly? Is it because artistic taste is entirely an artificial production and, therefore, sees only what it is taught to see? Or is it that all the forces and "accidents" of nature are so governed and molded as to result only in pleasing and graceful forms?

Take trees for example. For several months I have been more or less watchful, as opportunities offered, to find a really one-sided or unsymmetrical tree, and have been surprised at my want of success. It surely would be expected, considering the accidents to which trees are exposed from their tenderest sapling days, that many would grow up deformed and even repulsive. It is true they are often rent by tempest and thunderbolt, but a few years generally suffices to heal the wounds and conceal, to a large extent, the gaps thus

Ralph E. Berger, Reading, Pa.

made. There seems to be a veritable spirit of beauty which inhabits all these vegetable bodies, which forbids them violating the laws of graceful proportion; and if a specially lusty branch shoots out upon one side, it is bent around or counter-balanced in some way upon the other, so that while there is infinite variety and freedom, there is always infinite balance and grace.

If this is true of the material and physical world, it must be intended to hold also, and much more so, in the intellectual and spiritual worlds. But does it? Do you believe that if we could each see our own mental nature as we have cultivated it or allowed it to develop, standing out bodily before our vision, as a tree does, would it be evenly balanced and comely? Would all the branches of our minds, or powers and capacities, great and small, be found proportionate and perfect? This is the ideal which should penetrate every system of education; it should be held up steadily before the eye of every teacher and parent, and worked toward by every thoughtful man or woman who is ambitious to realize the highest attainment in intellectual character.

But how can this be achieved? This is a world of work. It is coming to be expected, even among educators, that girls and boys, almost as soon as they have fairly begun their intellectual development, shall commence to specialize; that is, shall direct their studies into special lines indicated by individual preferences or the requirements of a chosen life work, to the neglect, to a large extent, of all else. At the latest, the man, as soon as his school days are over, turns his whole energy toward business, which generally means the neglect of all or most of the finer and more esthetic elements of his nature, until they become withered and almost lost. Along this line of thought, Hillis, speaking of Darwin, says, "Through a full score of years he gave every moment of his time and every particle of his strength to the study of roots and seeds and flowers, of eggs and birds and beasts. At the age of fifty Darwin discovered that his love of music and poetry had faded away through disuse: the proportion of intellectual force which belonged to the taste and imagination had been given to the faculties of observation. Robbed of their food the esthetic faculties had decayed and finally died. In the hour of ill health, when he needed the relaxation of song and drama, the great scientist wrote very pathetically: 'If I had to live my life again, I would have made a rule to read some poetry and listen to some music at least once every week; for perhaps the parts of my brain now atrophied would have been kept active through use. The loss of these tastes is a loss of happiness, and may possibly be injurious to the intellectual, and more probably, to the moral character by enfeebling the emotional part of our nature.' With greater sorrow does Mr. Darwin refer to the decline of his spiritual faculty. Through neglect he lost his religious sense, with the loss of his taste for music and poetry."

Through thus much of preface are we brought to the subject of this paper; for it is of amateur photography that I wish to speak, as a recreation and as a means of keeping alive and cultivating most of those faculties which are most likely to lie dormant or remain in embryo, through the overcrowding of our daily occupations. This applies to women as well as to men, though, probably, to a less degree.

It is to meet this recognized need, I suppose, that literary clubs are organized and maintained. Had I only the time and skill adequately to set forth the pleasures and possibilities of this fascinating fad — photography — I feel confident I should make "Kodak fiends" of you all and earn your lifelong gratitude.

Probably the worst enemy amateur photography has ever had is the host of children and older triflers who have taken up the camera merely as a toy; who have no disposition and, many times, not the capacity to master the technic sufficiently to achieve anything worthy the name of success. An "amateur" is, as the name implies, a *lover*, and a lover to be worthy of such recognition must show an earnestness and attachment beyond a mere passing fancy. The freaks and follies and failures of dabblers have brought amateur photography into ridicule and contempt so often that, doubtless, a large proportion of really self-respecting people feel that they owe the public an apology for being seen with a camera, and expect the pitying smile or the covert sneer of others not afflicted with such a weakness. No doubt the camera, like most other objects of admiration, often has cause to blush for its followers. It can, however, be said of photography, more truly than of most other recreations to which amateurs are, from time to time, devoted, that she shows herself worthy of their devotion. She has attractions varied and lasting enough to make her well worth the most ardent and persevering wooing; and rewards rich enough to well repay and encourage the most persistent pursuit. A child's primer is, it is true, easily understood, and as easily exhausted and thrown aside. It is otherwise with Shakespeare. If photography were the child's primer, only children would be amused by it, and they but for an hour.

If we turn our attention to the camera itself for a moment — the essential implement of the photographer — we find in it no insignificant object for study and admiration.

There are few directions in which, during the last twenty-five years, more study, invention and money have been expended than in bringing to its present state of perfection, the hand camera. It is multitudinous in forms and names, so as to adapt itself to the more multitudinous uses and users; and a fair knowledge of the optical and mechanical principles involved in these varied forms, enough to enable one to select, intelligently, the style best suited to the purchaser's purposes and purse, involves no mean education in itself. Even in the matter of lenses alone, one is immediately bewildered by their variety and merits. And since the lens is the very center and soul of the camera, it behooves one to choose wisely and liberally; for nowhere else will parsimony prove such poor economy as in buying a lens. Fortunately, the better grades of cameras and lenses are not inseparable, so the beginner may readily supply himself with a better lens when he has sufficient experience to learn his need; and without waiting, in the beginning, to master the mysteries of "rectilinear," "collinear," "anastigmatic," "wide-angle," "long focus," etc., all of which will unravel themselves in due time. Fortunately, too, the better grades of hand cameras are now supplied with what might be called a standard "rapid rectilinear" lens, which will ordinarily satisfy the average amateur until he has become quite proficient in the art.

Aside from the lens, there are a great many points to be considered in the selection of a camera. Among the first of these will be the shutter, of which there is almost as great a variety as of lenses, and of all degrees of complication and adaptability to various uses.

The question of plates or films; whether it shall be a box camera or a folding one; the length of the bellows; sliding front, reversible back, side swing and vertical swing, fixed or adjustable focus, finders, levels, focusing scales, tripod sockets and all that, are to be thought of, with the advantages and disadvantages of each different combination.

It is not surprising that the beginner finds himself paralyzed by the onslaught of all these questions, and has to use up or outgrow two or three cameras before he really learns what he wants. It is not to be supposed he will have mastered all these mysteries before he buys his first camera. Some kind friend who has become somewhat initiated will, perhaps, assist in the selection; or, possibly, he may suddenly find himself the owner of a presentation instrument, in the choice of which he has had no part. In any case, his education is now to begin and is to continue, so long as he will listen to the voice of this enchantress, which, like Dante's poet guide, will lead him through regions and experiences more varied, if not more thrilling, than those of the Divina Commedia.

From optics and mechanics he is, presently, ushered into the realm of chemistry. He is incarcerated in a rayless dungeon, called a "darkroom," whose stygian gloom is made lurid by the baleful glare and petrolean fumes of a "ruby lantern." Here, surrounded by trays and bottles, graduates and tanks, he wrestles with developers and fixers, toners, reducers, intensifiers, drying-racks and printing-frames. When, at length, he seeks his bed and falls into a troubled sleep, his anxious wife hears him muttering of "hypo," "hydroquinone," "nonhalation," "Aristo-platino," "Metol," "Velox," "bromid," "eikonogen," "isochromatic," "contrasty" and other such cabalistic names. He becomes more addicted to "hypo" than any confirmed hypochondriac, and yet, strangely enough, it does not seem to depress his spirits, but contrariwise. He learns what, perhaps, he had never grasped before, that true success is made far more by exact attention to a multiplicity of details than by some great and theatrical burst of "slap-dash"; that lack of accuracy, precision and nicety will in a thousand ways destroy or mar the results of much labor and protracted patience. In other words, he learns "technic," or how *to do things* painstakingly and carefully. Can any one estimate how much it would mean to every man, woman and child if they could, in some way, be made to learn that lesson in early life? How much more of pleasure and satisfaction in every-day life; how much less of helplessness, dependence and inefficiency? What pleasure is greater than the creative power? To have the ability to produce things and see them grow into completeness in one's hands, and to enjoy the use of such creations, when they are perfect enough to fulfil their design, shows how we are formed in the image of our Creator, and enables us to catch a glimpse of the joy He had when He created the world and pronounced it "very good." Likewise the pride, the pains and the patience we gladly lavish upon some masterpiece of our own handiwork, give us a faint conception of the love "the Father hath bestowed upon us," who are the crowning glory of His creative power, as exhibited on earth.

It has well been observed that we usually take more pleasure and pride in some work we do in an amateur way, than in what we do as a regular employment or vocation in life. Abundant illustration of this might be cited, but our own experience and observation are sufficient proof.

This brings us around to consider, a little, from another point of view, the necessity for every person of some form of recreation or relaxation.

I spoke of this, a few moments ago, in view of its influence, or at least its possible influence, upon the mental and moral character and development. I wish to allude, now, to its influence upon the physical, mental and moral health and happiness — the pleasure of living — the prolongation of youth and the postponement of old age. It would seem that this has been sufficiently dwelt upon by many others already; excessively so, by those who carry what might and should be recreation, to the extent of making it dissipation, by allowing it to take the place of work, instead of a rest from work. But it is the man or woman who works incessantly, who needs to learn that he can do more, live longer, enjoy life better and make others happier by allowing himself a reasonable amount of recreation.

The great difficulty has been to know how to get this, of such a character as would appeal to a cultivated, thoughtful person, which will supply the needs already referred to and will be available to many. The objection to most forms of recreation is that one must go too far, or take too much time, or spend too much money to secure them. Recreations, like condiments, should be at hand to be used as we go along, and not taken in a lump, by themselves, like a teaspoonful of salt or a pinch of pepper, after one has finished a meal. They should give variety, taking the student or the merchant or the homekeeper out into the air, the fields, the woods and the sunshine, at least sometimes; lifting the eyes up to the trees, the hills and the cloud-bedecked heavens; opening the ears to the song of brooks and birds and breezes; giving the muscles some play; filling the soul with the love of nature and lifting it up toward nature's God.

"Oh, what a glory doth this world put on
For him who, with a fervent heart, goes forth
Under the bright and glorious sky and looks
On duties well performed and days well spent!
For him the wind, aye, and the yellow leaves
Shall have a voice and give him eloquent
teaching."

Now I invite you to consider whether photography fulfils these requirements. We have now only considered some of the preliminaries. We glanced at the camera and took a peep into the dark-room, without dwelling upon the possibilities for the cultivation and display of artistic taste, skill and judgment, which may be found there. It is a place of miracles and magic. You have put into your camera a little sheet of glass, upon one side of which there is a film of opaque white varnish. You pointed your lens toward some scene you wished to perpetuate and snapped your shutter. For the fiftieth of a second a little opening was made and closed again. But during that instantaneous wink of that little cyclopean eye, there dashed through it a beam of light long enough to more than half encircle the earth, which was caught and imprisoned by that milky film.

Geo. T. Power, Chicago.

Take it now into your enchanted chamber and lay it in a little tray, under the light of your ruby lamp. Pour upon it some crystal clear water, into which the chemist has dipped his magic wand, and lo! as you gaze, there slowly blossoms out upon the opal surface each line and curve and shadow of the scene you saw, it may be a moment, a month or a year before. After a little study and observation you learn to regulate this process of development so as to counteract the effect of too long or too short exposure, and in many other ways make the best out of your negative, according to the various subjects or the various uses with which you have to do. But, as I have just said, these are all and only subsidiary to the real and essential part of photography — the ability to take the picture, the eye to see and appreciate the picture, to discover how to see it, when to see it at its best and to make the best out of it.

It should be noticed that there are two distinct uses to which a camera is put; that is, the taking of "photographs" and the making of "pictures." The distinction is being more and more emphasized of later years. A "photograph" simply reproduces the appearance of whatever is before the camera when the shutter is opened. It is a record of the appearance of some object or objects. It might be a packing-box, a barn, a business block or a person's face or figure. It does not require that there should be any element of beauty in the object, or any thing which would appeal to our esthetic nature. It simply records how certain things appear.

Such photographs are no more to be considered "pictures" than an inventory of household goods would be considered "literature." A picture must appeal to artistic taste. It must have in it something of the picturesque and the beautiful. It may deal with the simplest, the most common and the most humble of subjects, as well as the most sublime or romantic; but he who has the "seeing eye" should be able to discern in it something of beauty or sentiment or soul.

Now the taking of photographs is not to be despised. It has its uses, and they are by no means insignificant. It requires not a little skill, knowledge and judgment; but no sincere "amateur" would be content to stop there. A bugle or a cornet might be used to give commands to soldiers or to call workmen to dinner, and would require some skill and practice on the part of him who blew it, to do even this; but no musician would consider that the highest object for which it was created.

It is, therefore, to the making of pictures, rather than to the "taking of photographs," to which I wish to direct attention, as the ideal use to be made of a camera. It is just here that we approach to the real educational refining, uplifting and recreating power of amateur photography. Whether the making of pictures by photography should ever be dignified by the name of Art (with a big A), is as yet under discussion.

There are many on both sides of the argument, and as there seems to be no one with sufficient authority to decide the dispute, it is likely to remain undecided, at least for the present. But in any case, there can be no dispute that artistic photography requires the development, to some extent, of the same artistic sense and feeling, to choose beautiful subjects, as are required in him who seeks to embody his perceptions or conceptions on canvas or in marble. When one has reached the point where he begins to look about him to see the picturesque or the beautiful, his artistic evolution has begun. It has been said of the microscope that it opens a new world of wonder and of beauty to him who gazes through it. It is no less true that he who comes to look about him through the lens of a camera steps out into a new world, and apprehends and rejoices in what was before to him unseen. We have all, of course, looked with wonder and pleasure at the endless variety and glory of the clouds and the overreaching sky, which poets and painters have ever striven in vain adequately to represent; but if one would magnify his pleasure in and appreciation of these celestial phenomena, let him undertake to reproduce them, even by photography. As with the sky, so with the landscape and every object which appeals to the eye. Whatever causes us to observe more attentively and study more carefully the gracefulness of force, the exquisite gradations of light and shade, the endless variety of combinations and grouping of all animate and inanimate things, can not fail to increase our apprehension and our powers of enjoyment, so that almost every view the eye lights upon is transformed from a meaningless and common thing into an object of beauty and pleasure.

> "O, Nature, gracious mother of us all!
> Within thy bosom myriad secrets lie
> Which thou surrenderest to the patient eye
> That seeks and waits."

It is a trite saying that we usually find what we are looking for. "Seek and ye shall find," is a principle of universal application.

The man or woman who goes forth with a camera is pledged to seek for all beautiful and delightful things, and assuredly he shall not seek in vain. He hears the voice of all nature calling out to him in language which seems like a physical echo of that cry from the spiritual world, borne from that Roman prison to the little band at Philippi, "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, *think on these things.*"

He is bound to think of delightful objects to carry home with him. He has no eyes for any others. He gets in the habit of it, whether he has his camera with him or not. It grows upon him, and he looks at everything he sees through his camera, and he sees beautiful pictures everywhere, even when he least expects it. The naked trees display their delicate tracery of branch and twig against the winter sky, almost more charming than when hung with summer's foliage. The children playing in the streets pose for him in a thousand graceful groups and attitudes. Upon the street or in public assemblies he finds an unfailing opportunity for, and pleasure in, studying the faces he sees, the expression, the pose, the lights and shadows; for although, to the amateur, portrait photography presents many serious difficulties, and he can hardly expect to compete with professionals, he is by no means debarred from success, even in this department. It may readily happen that his results may prove more satisfactory in preserving the natural expressions and attitudes, as well as the surroundings of the members of the family circle, than the more studied and made-up products of the studio. Even the simpler forms of retouching are not beyond his reach; but it is greatly to be hoped the amateur may never be able, nor even desire, to sandpaper out of his portraits all the lines and wrinkles which time and experience have so painstakingly engraven there and which to the discerning eye are eloquent with character and beauty. Pitiable indeed is the shallow pride which would wish to obliterate all those fine lines which reveal the individuality and development of the soul, in order to conceal the evidences of advancing years. By the aid of the flash-light, very many of those domestic scenes and incidents may be recorded, which, in after years, would be cherished as beyond price.

To the traveler, the camera is a companion whose worth can hardly be exaggerated; for were no views worth preserving secured, the mere watching for scenes worthy to be photographed keeps the attention alert and fixes what one sees on the memory as hardly anything else would do.

During the last few years, books and magazine articles have pointedly drawn attention to the advantages of the camera over the gun as a weapon for the sportsman. It certainly demands more skill and shows a far higher degree of Christian civilization to go hunting with a camera than to take pleasure in killing the creatures of the forest and field; and if it comes to a question of personal prowess or courage in hunting large game, Ernest Thompson-Seton has given us a glimpse of how much nerve might be called for to catch snapshots of a grizzly bear at short range in his native forest.

Time would not permit an enumeration even of all the uses to which the camera may be put by the amateur alone, without alluding to its extensive and varied uses in the sciences and arts.

Whoever wishes to study any of these phases of the subject will find quite an extensive literature awaiting his use. Particularly is this true in amateur lines. Much has been and is being written, and many most attractive and instructive periodicals are published; some of which should be on the table of every one who aspires to the honor of being counted an "amateur photographer."

A. G. BEEBE.

"THE KORONA AND THE FILM PACK" is the title of an artistic folder issued by the Gundlach-Manhattan Optical Company, which announces that the well-known Film Pack can now be used with Korona cameras. By means of this device, the field of usefulness of the Korona is greatly enlarged, and it is thereby converted into a focusing film camera. We advise those who own Koronas, and those who contemplate the purchase of a new camera, to send to the Gundlach-Manhattan Optical Company for the new folder.

WANTED, A QUESTION BOX.

Mr. Todd:

DEAR SIR,— I want a question box. That is all your valuable PHOTO-BEACON lacks.

Here is one question: Should camera shutters ever be oiled? My shutter refused to work: it would open, but would not shut without touching it. After spoiling a few pictures I poured coal oil over it and it has worked fine ever since. Is there any danger of the coal oil hurting it?

2. Can a developed plate be exposed to the light just as soon as the hypo is poured over it without hurting the picture. I have heard that it could.

3. In using a burnisher, is the castile soap rubbed on a cloth and then the cloth rubbed over the polished roller? Should the roller be hot or cold? Is benzine and paraffin (such as is used on a ferrotype) just as good as the soap?

I have no one to ask a question of and all I know I have learned out of your PHOTO-BEACON. So *please* let us have a question box, as it will help beginners so much.

MRS. H. W. SCHENCK.

ANSWERS.

We answer many questions by mail every day, but if the readers prefer the replies printed they can certainly have them; so fire away.

1. Yes, shutters require occasional oiling and cleaning as verdigris is apt to gather. Pure kerosene oil contains no oxygen and therefore is much used as a rust preventer, but a good lubricating oil is better.

2. Why expose it to the light? If light is strong it may precipitate sulphur in film; result, uneven yellow stain.

3. Use castile soap only. Hot roller, same temperature as a flat-iron; test by touching with moist finger.

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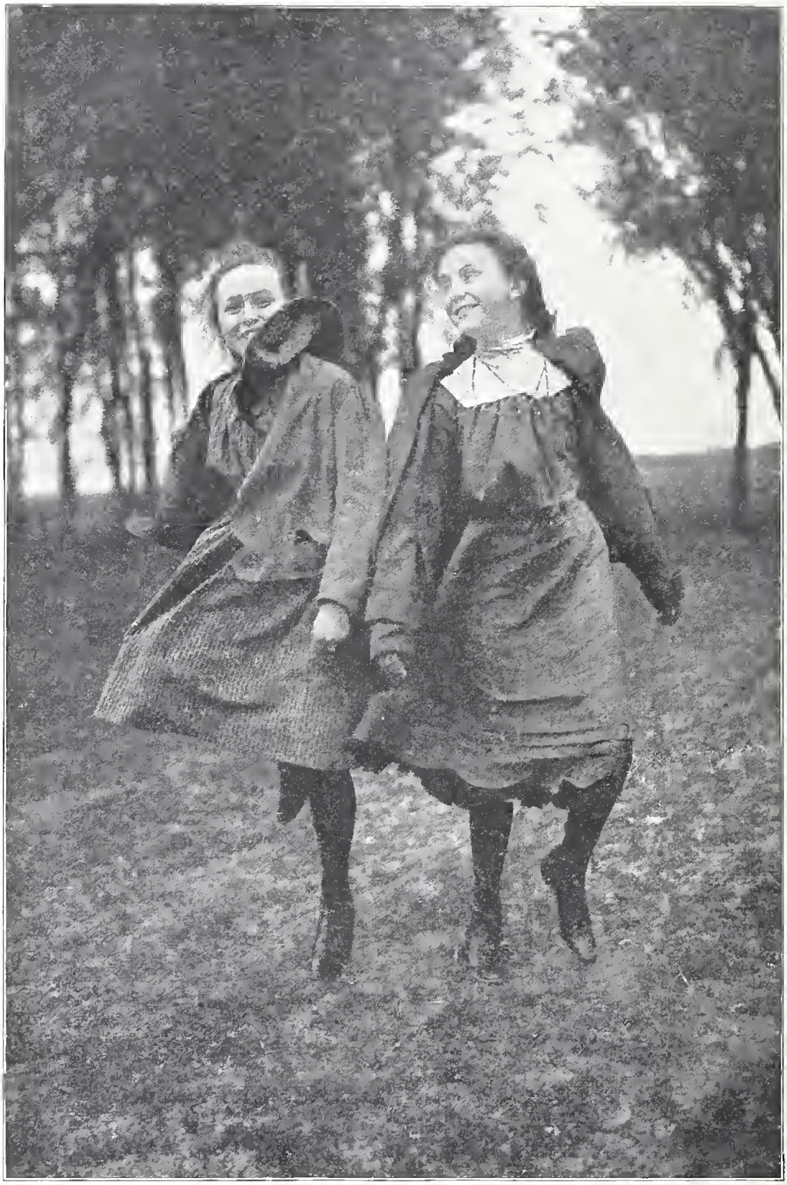

Louis Fleckenstein. Faribault, Minn.

FIRST PRIZE.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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SPECIAL NOTICE.

A very large number of subscriptions expire with this issue of the magazine, and we would request the readers to renew their subscriptions as early in the month as possible so as to make certain that they will be on the list when the January number is issued. It is also a great saving to us in office work when a subscription is renewed promptly, because a renewal takes but a couple of minutes of a clerk's time, whereas dropping a subscription and reëntering it is responsible for at least ten minutes. Seeing that hundreds of letters reach our office every day during December and January, our readers can see for themselves how much we appreciate the careful reader who is prompt in his remittance.

THE CRAMER TRICHROMATIC PLATE.

From a number of letters to hand I find the average reader is laboring under misconception regarding this plate, all supposing that it is not sensitive to red. They unfortunately stop reading my notes at the end of the second line on the second column of page 324 in November issue, instead of finishing the sentence. Reference to a chart of the spectrum will show that the red rays extend from A to a point midway between C and D. A careful reading of what I wrote will show that the trichromatic plate is therefore sensitive to the band of red rays lying between two points, one of which is midway between B and C and the other between C and D. Theoretically, a plate sensitive to all red rays would be a good thing to have, but it would be practically useless as it would have to be coated and developed in absolute darkness. A plate to be developed in light must be insensitive to some part of the spectrum and the preference is deliberately given to that between A and B. Safe lights for the development of such plates are on the market, being manufactured both by the M. A. Seed Dry Plate Company, St. Louis, and Burke & James, of Chicago. These cut out all rays excepting the red from A to B and are therefore safe with reasonable precautions.

F. DUNDAS TODD.

SOUTH AND EAST.

Much to my surprise, I received quite a number of letters regarding my St. Louis article in the last issue of this magazine, and one and all the writers urge me the next time I take a little run around to give notes of my experience, as they form rather interesting reading to those whose circumstances compel them to stay at home. It so happened that when these letters began to arrive I had just got back from a two weeks' trip in the South and East, and, being full of what I had seen there, I at once determined to acquiesce in the desires of my correspondents.

I left Chicago on the 19th of October, making my way to Greensboro, North Carolina, where the annual convention of the Photographers of Virginia and North Carolina, was being held. I had never been in that part of the world and had welcomed with much pleasure a cordial invitation from the members to address them on some photographic subjects.

Little need be said of my railroad journey, until I got into the mountainous regions, where I need hardly say I feasted my eyes for many hours as the train went winding through a sea of hills, as a Scotchman would call them, but which I found the natives described by the more pretentious term, "mountains." To one raised among hills, the prairie soon becomes very monotonous, and it is always with a feeling of relief that I travel through a mountainous region, which brings back to me many past recollections that are very pleasant. When I saw lying before me the Shenandoah valley, I felt as if I were gazing upon some Scotch strath or glen, and I was sorry when the last glimpses of it faded from my view.

I enjoyed every minute of my two days' stay in Greensboro. My first experience of a Southern convention was most pleasant, and after cogitating considerably as to the best word to use in describing this gathering, I am forced to confess that the one word that seems best to suit the case is "comfortable." My experience of Southern photographers at other conventions had prepared me for having a pleasant time, but all was done so quietly, so pleasantly and with so much considerate forethought, that all one had to do was simply to enjoy one's self and feel thoroughly comfortable.

Looking back, I am rather dubious as to whether we Northern folks are so wise after all. We glorify hustle, get-up and push, yet the Southern photographer who apparently takes things more easily, looks to me as if he made a more comfortable living than those of his brother professionals in the North, and it is possible that the white folks South are not so foolish after all. Life, it seems to me, is just worth what we get out of it day by day, and if we get no pleasure every day, then we are denying ourselves something we are legitimately entitled to.

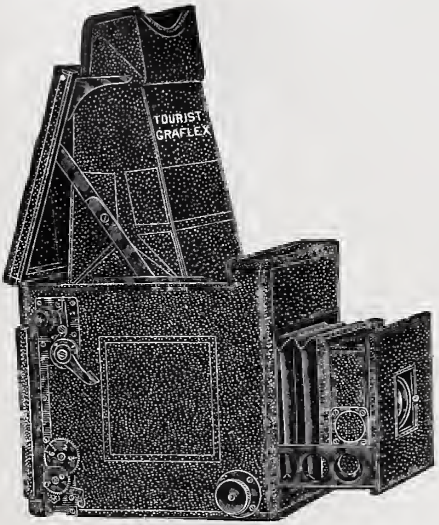
I think I need hardly say that the convention was a success. From a purely educational standpoint, I think it filled the bill, and the officers delivered to the members all the goods they had contracted to furnish, and more.

It is almost impossible to sit down with a number of men and talk over things in general without getting a new point of view on some things, and from this convention I carry away with me a very clever definition of the "successful portrait." One photographer was telling how a gentleman came in to pay for his wife's photographs and incidentally he remarked, "Do you consider that my wife looks like these pictures?" and the photographer promptly replied, "I do not, but I know they look as she thinks herself to appear, or would like to appear." Really, when one sums it up, this man has found one of the keys to successful portraiture, and no matter whether the woman be a resident of North Carolina, New York, Chicago or San Francisco, she is practically built the same way. She is perfectly willing to be fooled into believing that she really looks in accordance with the pictures the photographer made of her.

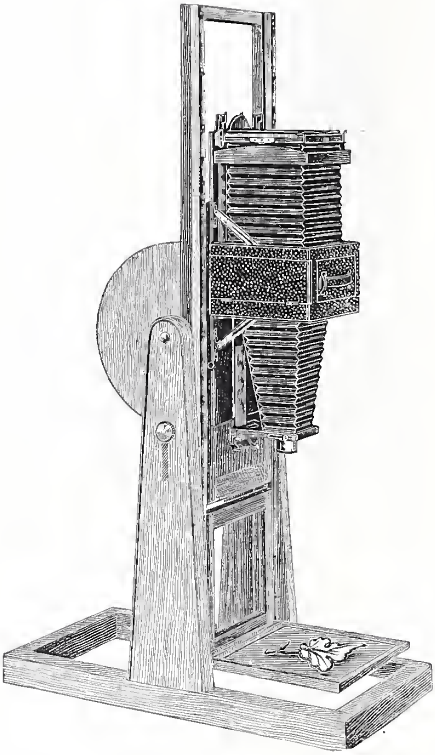
My journey home was rather a circuitous one. I spent three days in Philadelphia calling on my old friends. Business I found to be very, very quiet in this city. In fact, I found it to be so all along the line, but in my experience it was nothing unusual at this season of the year, for in past Eastern trips in the month of November I have always found the same story — nothing doing. All the photographers admitted that the Christmas trade, instead of commencing at the end of September, as it used to, now does not set in until the end of November, and is a good deal less in bulk than in former years. On Sunday I had a long walk in one of the most beautiful natural public parks in this country. It lies along the banks of the Wissahickon, and it reminded me of old times to see the large number of cameras carried by those who were enjoying the delightful day. I think I saw more photographic outfits there in use than I had seen all told for two years, indicating that beautiful scenery still has a charm for the amateur photographer.

In New York city, where I spent four days, I had much of my usual experience there of covering a great deal of territory without seeing very many people. In one day I think I called on over a dozen firms to find only two of the heads in the office, and so had to work the same ground all over again another day. I found Mr. Hollinger feeling as happy as a cricket, as usual, having had a specially good holiday in Ohio, and he had to confess that the fun was so fast and furious that he could not tear himself away from it to make his annual appearance at the convention. Mrs. Kasebier was a monument of patience surrounded by a most magnificent tear-up, as goodness knows how many carpenters and decorators put in new frills on her studio, but she was as interesting as usual, and having found a Scotch ear in which to pour her enthusiasm, she expatiated at length on the beauties of "Wee Macgregor." Switching off from that, she gave me a serious scolding, because I had not yet read the "Golden Age," by Kenneth Graham, another ideal book about children. It so happened that I had made a note of this book for future reading, and so she kindly granted me absolution, and rewarded me by showing me some child pictures that she had made during the summer, inspired by this book, and I must say that they were so charming that they incited me still more to peruse it at the earliest possible moment.

Two of my pleasantest hours in New York were spent in the factory of the Folmer & Schwing Manufacturing Company, 407 Broome street, where I found some things that were really new in cameras. As everybody knows, this firm is noted for the very fine quality of the instruments they manufacture, and any one who can appreciate mechanical skill is always interested in anything this firm makes, whether they can afford the price or not. Perhaps their best-known instrument is the Graflex, in which a view to be taken can be seen up to the instant of exposure and focusing is possible up to the moment the button is pressed. It is specially suited for figure studies of all kinds, and many of the football and baseball and similar illustrations found in our daily newspapers testify to the excellent qualities of this instrument. In preparation for use at the St. Louis World's Fair, which, as everybody knows, is to be held in 1904, the firm is modifying the 4 by 5 size, and has introduced a new instrument under the title of the Graflex Tourist, which is certain to be very popular for the kind of work that the average man will find there. The principal feature of this instrument is its remarkable compactness as compared with the old type, as it is only 6 by 7¼ by 7¾ in dimensions, while the weight is only about one-half of the other, being 4¾ pounds. It is also suited for lenses of shorter focus, its range being for instruments of 5⅞ inches to 7 inches. The magazine holder for use with this and the other cameras made by the firm has undergone a very decided modification of the method of changing the exposed film. In the

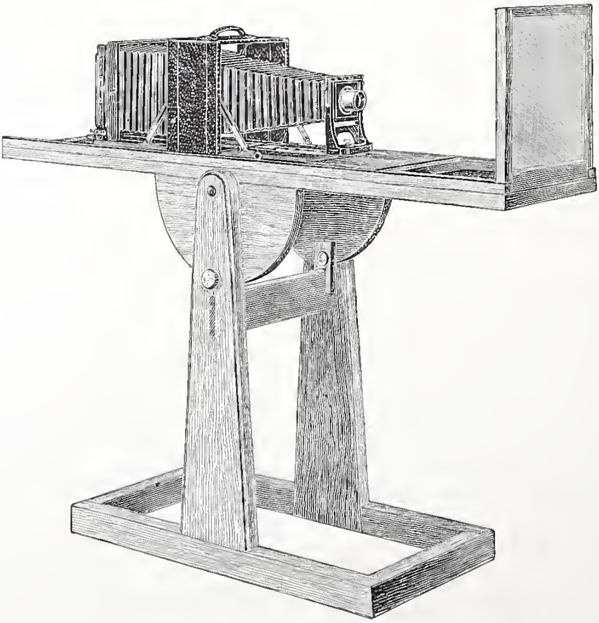


TOURIST GRAFLEX.



earlier type the changing device consisted of a plunger, but in this it is a curtain-slide holder, working from the back and round the lower end of the holder. The advantages of the new form are: first, the action is more positive than before, since it pushes the film holder entirely into the changing back, whereas, in the older form, at least one inch of the film holder was left in the magazine, and in the next place it avoids the possibility of the plunger channel becoming filled with chips of glass, with the additional risk of scratching the film and jamming the mechanism. It will also permit the removal of the spring cut-off from the back end of the holder, making it more compact and less liable to fog.

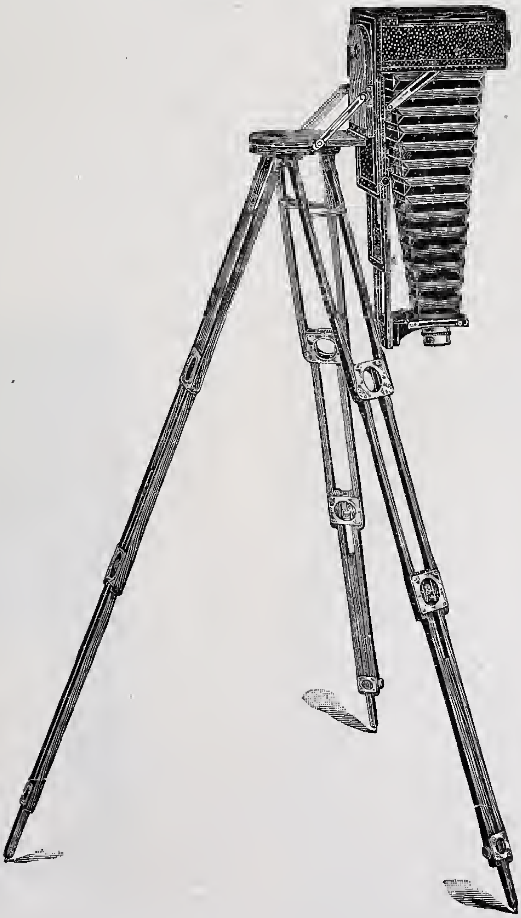
One of my Chicago readers pays me a visit occasionally and feasts my eyes with very beautiful photographs of flowers, all of which are made by the use of a tilting stand. I need not enter into an elaborate description of it, because the cut will show this construction. A very beautiful stand of this type is manufactured by Folmer & Schwing, under the title of the "Tilting Laboratory Stand." The uses of this



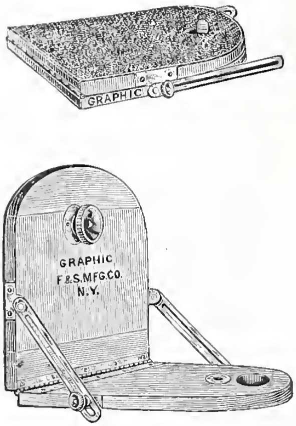
TILTING LABORATORY STAND.

instrument are manifold. For instance, in flower photography, the best results are not obtainable when the flowers are erect, because of the tendency of the flowers to take outlines that are not artistic, and so all successful workers in this line prefer to photograph them when they are lying on a glass surface, which, of course, is invisible to the camera, and it is very easy to place beneath them a suitable background that will harmonize with the colors of the blossoms. This instrument provides for this and also for photographing any solid object in a similar way, but it can also be used for copying or enlarging direct, or for making lantern slides, transparencies or reduced negatives. Altogether it is a mighty comfortable instrument both to the scientist and the amateur photographer who goes in for something more than mere snapping, and I was not a bit surprised to find it had had quite a sale.

Less directly, the same end may be achieved by the " Tilting Tripod Top," which permits a camera being used at almost any conceivable angle. It may be pointed down as in the illustration, but it may just as readily be directed straight upward. The user of the camera with a non-reversible back will find it exceedingly convenient, because if the horizontal view on the ground-glass does not suit him, by simply tilting the top, he can bring the plate into a perpendicular position, and be thus saved the trouble of screwing and unscrewing the instrument. Nay, more, if he be ambitious to photograph on



TILTING TRIPOD TOP IN USE.

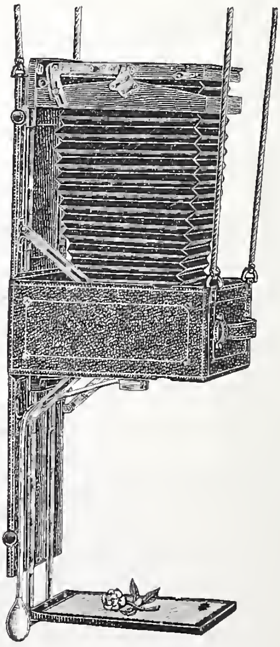


TILTING TRIPOD TOP.

the angle, that is to say, have the diagonal of the plate perpendicular, this instrument will accommodate him and so any amateur will find it a useful adjunct. I have used one of less compact construction for several years and find it a great convenience in many situations.

For the United States Government this firm has designed what they call the "Naturalist's Camera," and it is now much used by many professors in State colleges and others occupied in similar practical work. Its principal feature is the stand to which it is attached, and the arrangements are such that without going to the bother of focusing, it is possible to make a life-sized photograph of some natural object in the fields in a few minutes. For indoor work, even the tripod is unnecessary, because by means of four strings attached to the instrument, it can be suspended from the ceiling, or from a doorway in a vertical position.

As everybody knows, Rochester is the home of the camera business of this country and one can spend quite a number of days there, and be interested in cameras and their adjuncts all the time. I was very much interested to see the way in which the Eastman Kodak Company utilized the new developing machine in their daily work. Everybody knows that kodak users send their films from all over the world to Rochester to be developed, and this has been quite a complicated business in the past. It is now brought down to a mechanical basis, and I was amused to see four of the machines hitched to a mechanism which turned the cranks. The developer has been diluted until the proper density is attained in seven minutes and this permits the loading of a new machine every two minutes. As soon as the instrument is harnessed, the party makes a note on a small card when the film should be taken out, and then proceeds to the next, and so on until all are loaded. By the time he is finished, number one is fully developed. The developer is emptied from the instrument, a current of water passed through it to stop further development, the film taken out, passed into a long tray to be fixed and a new roll added, a new solution poured in and started and then number two is dealt with in the same way. The mechanism is run by the action of water on a small water wheel and the overflow is used to wash the films. There is no doubt whatsoever that the negatives made in this mechanical way are far better than by the old tedious process of hand development.



NATURALIST'S CAMERA
Hanging from a doorway.

The Gundlach-Manhattan Optical Company at one time were well known in the scientific world as manufacturers of microscopes and telescopes, but when the great wave of camera business came upon them a few years ago, they were compelled to curtail their output in this field. Their plant has been very much increased in size since the earlier days, and at length they have found accommodation enough to once more take up the optical end of their business, and I was very much interested in a new telescope that they have recently designed for astronomical use. And here let me tell a story of an experience in my early days. In our little town where I spent my youth, there lived a man about sixty years of age who had retired from the grocery business. One day he asked me if I knew anything about algebra, and on finding out that I did, he asked me what I would charge him for a few lessons. I laughed at his proposition, told him that since he had all the money he needed in this world, I did not see why he should bother himself about things for which he could find no use, and that all he had to do now was to have a good time for the balance of his life, but he persisted in his appeal, and at last I asked him what he wanted a knowledge of algebra for? He pledged me to secrecy and then he went on to say that, like all men of his years, he had been giving considerable consideration to the question of the future and what he was to do after he was dead, and he had come to the conclusion that in the next world he expected to spend a great deal of his time studying the wonderful truths of astronomy. Then he went on to say that he understood it was impossible to know much about astronomy unless one knew algebra, and that, therefore, he was willing to put in a good deal of time on the subject, more so that he would be partly prepared for the future. John has now joined the great majority and is viewing the stars from the other side, and I sometimes wonder if the very little smattering of algebra he was able to acquire ever proved of any value to him. If any one wants to have a good time on this earth viewing the stars, and at the same time believes as John did in the great hereafter, I think I would advise him to invest in a Gundlach-Manhattan 3½-inch telescope.

The Seneca Camera Company this season have made a bid for a high-class camera trade, and I was very much interested in overhauling their latest models. They are Nos. 20 and 21 and are handsome instruments, the woodwork being mahogany ebonized, presenting an appearance that must make the owner feel he is possessed of one of the best samples of camera work that can be made. All of their instruments

NATURALIST'S CAMERA
As used in the field.

are fitted with a very ingenious automatic clamp with press-button pull that needs to be seen before it can be appreciated. The spring back adjustment is also novel. The spring is manipulated with a thumb-screw placed in the top of the box and can be easily operated at the same time the focusing is being done. The result is that no locks are necessary to keep the camera in position; in fact, the spring is always locked, and at the same time is always ready for adjustment. It needs merely to be said that all instruments can be had fitted with any lens to be found on the American market.

This is rather a long story, but is not nearly so long as my trip. I do not expect to leave town again for some months, so that the reader will have time to get over this long talk before another dose is given to him.

F. DUNDAS TODD.

PICTORIAL COMPETITION No. 66.

The average amateur is very much addicted to the making of snap-shots, and ordinarily the results are about equal to the time and consideration given them. It was therefore with very much pleasure that the judges found some pretensions to pictorial quality in many of the prints submitted in this competition.

The following are the awards:

First Prize — Louis Fleckenstein, Faribault, Minnesota.

Second Prize — E. F. Oyster, 324 Dearborn street, Chicago.

Third Prize — Albert H. Moberg, 945 Seminary avenue, Chicago.

PARTICULARS OF WINNING PICTURES.

First Prize — Made on a cloudy day in July, at 4 P.M., on Standard plate; exposure, 1-300 second, with a focal plane shutter and Goerz lens at open stop. Printed on Kallitype paper.

Second Prize — Made on a hazy day at noon, on Stanley plate, 3¼ by 4¼, in 1-25 second. Enlarged to 8 by 10 on Royal bromid, printing being through bolting cloth.

Third Prize — Particulars forgotten. Printed on platinum paper.

FUTURE COMPETITIONS.

Competition No. 68 — Flower pictures. Closes December 31.

Competition No. 69 — Pictures of children under seven years of age, not necessarily portraits. Closes January 31.

Competition No. 70 — Lantern slides, any subject. Closes February 28.

Competition No. 71 — Snow pictures. Closes March 31.

Competition No. 72 — Waterscapes. Closes April 30.

Competition No. 73 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 74 — Domestic animals. Closes June 30.

Competition No. 75—Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 76 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 77 —" At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 78 — Snap-shot pictures. Closes October 31.

Competition No. 79 — Landscapes. Closes November 30.

Competition No. 80 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else.* The outside of the package, in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of $5.

Second—Books to the value of $2.50.

Third — Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

E. F. Oyster. Chicago.

SECOND PRIZE.

THE THORNTON-PICKARD SHUTTER.

After all, say Lloyd's people, there are no shutters like Thornton-Pickard's, and other people think so, too; it doesn't matter from what view-point one regards them. Price? Lowest-priced shutter made of high repute. Reliable? They work as smoothly, evenly and certainly — almost — as the sun. Correct? Much the nearest correct shutter on the market. You see light goes fast, and the smallest little bit of time is plenty time enough to let a lot of light go in — so, when a shutter opens from the center and closes back to the center, it is simply sure to expose the center longer than the other parts of the plate. It can't help it. Now, the Thornton-Pickards begin the exposure at the top and finish it at the bottom, so all parts of the plate are uniformly, evenly exposed. This is a great optical advantage the Thornton-Pickards possess. Again, they work smoothly, operating surely without any sudden jar, and thus the lens is spared all that injury which is caused by sharp and sudden convulsive mechanical movements.

Repairs are simple and inexpensive on T.-P. shutters; they are not at all complicated or delicate; they stand lots of use and even abuse before they begin to think of giving out.

The Focal Planes are too widely and well known to call for extensive comment. Suffice it to say that a shutter that will take a rifle ball in flight, illuminated by electric light, is quite competent to take as rapid a motion as may be required.

A very large part of our different photographic work is done with some of the fine, high-class lenses and Thornton-Pickard Focal Plane Shutters.

Lloyd's 1903 Encyclopedia is rapidly running out. The remaining copies, while they last, will be sent to any address for 20 cents — *verb. sap.*

MONTHLY PORTRAIT COMPETITION, OPEN TO PROFESSIONAL PHOTOGRAPHERS ONLY.

During 1903 it was my pleasure to talk on art principles before half a dozen photographic conventions. Wherever I went I found every one anxious to learn just where he stood, and I was frequently asked if I could not devise some plan whereby a photographer could get an unprejudiced estimate of the pictorial quality of his work whenever he desired it.

After considerable thought I have decided that the simplest way is to hold a monthly portrait competition open to professionals only. No prizes beyond the honor will be awarded. The first, second and third best will be reproduced each month with criticism by myself, and all others will be classified under "Honorable Mention," "Commendable" and "Also Ran." No names will be printed, only initials or *noms de plume*, so that only the sender will know his rating.

Whenever a competitor wants a private suggestive criticism, it will be sent him on payment of $1.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.
2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.
3. Requests for private criticism, accompanied by fee of $1, may be sent along with the print and will be answered after the judging is over.
4. Mark outside of package with the words "Portrait Competition."
5. Prints are not returnable.

PICTURE-MAKING, IN WINTER.

As the winter season draws near, the photographic worker naturally turns his attention to snow scenes and the best means of securing them. The smooth surface, uniform color and lack of shadows make the snow seem a very unresponsive subject for photographic work, but there is a charm about a winter landscape unsurpassed by the most beautiful foliage of summer. The delicate gradation of light and shade, the half-tones and soft long shadows furnish ample material for a skilled worker.

The best views are made either in the early morning or late afternoon, when the sun is low. At these times the long soft shadows lying across the ground are very effective and help in breaking up the monotonous stretches of white. If views must be taken in the middle of the day, better results will be obtained if they can be made in a diffused light, rather than in the glaring sun. From ten until nearly four the light falls too vertically, showing harsh, chalky whites and strong blacks, which are far from artistic. A sharp, frosty morning, about eight o'clock, is the best time for the ordinary snow picture.

Slow plates and as long an exposure as possible will give the best winter landscapes, although I have seen fine views made on very rapid plates. If the glare is great, very slow, thickly coated or non-halation plates should be used with a small stop. Backed plates are not *always* necessary, as some workers think, although they are often useful. When the light is very brilliant the smallest stop may be used, but in general F. 16, F. 22 and F. 32, according to the light, will be found good working apertures. The lens should not be focused too sharply, but should be turned just enough to give the very slightest suggestion of a diffused effect, but not enough to destroy the detail.

The yellow light which generally prevails during the winter months is so deceptive that no fixed rules can be depended upon. Exposures in midwinter average to be nearly four times as long as in midsummer, but must be regulated by the atmospheric conditions and the subject to be photographed. It is evident that a snow-covered landscape will require a much shorter exposure than the same view without the snow. Generally one-third the exposure which would be given at that time of year without snow will be found sufficient. If tree trunks or any dark objects are in the foreground it is best to give a full exposure, depending upon careful development to correct the overexposure.

I give below a formula which I have found very satisfactory:

NO. I.

Water	24 ounces
Eikonogen	180 grains
Hydroquinone	45 grains
Sodium sulphite (crys.)	3 ounces

NO. 2.

Water	24 ounces
Carbonate of potash	3 ounces

To develop, take:

No. 1	2 ounces
No. 2	1 ounce
Water	1 ounce

Albert H. Moberg. Chicago.

THIRD PRIZE.

The development of a snow picture is a delicate matter and demands the greatest care and attention. Personally, I am as much in favor of pyro for this work as I am for all other branches of photography. Many, however, prefer eikonogen, or better, a combination of eikonogen and hydroquinone, which, I think, has almost as much latitude as pyro. It is a remarkably useful developer, giving brilliant negatives with fine detail and softness in the half-tones.

The addition of more water gives less contrast and density. About five times the usual amount of water should be used for double-coated plates.

Whatever the developing agent may be, a very weak solution should be used so as to bring out the details, and then density may be secured by finishing in the normal developer. I usually dilute with one-third water and add a drop or two of bromid, if I have overexposed in the least. This gives a bright, snappy negative, full of detail. A successful snow negative must have a variety of half-tones, and this is the vital factor in its development. If development is carried too far the half-tones are lost. A little practice on such views — always using the same brand of plates and developer — will show the exact time to stop. If, however, any doubt is felt it is far better to stop too soon, depending upon intensification to produce shadow detail. Snow negatives should have plenty of detail without being too dense. P. M. RILEY.

INTERSTATE POSTAL CLUB.

The director of the above club, H. R. Pfaff, Jennings, Alabama, intimates that there are a few vacancies at present and solicits correspondence from those interested. The membership is limited to thirty; the annual dues are 50 cents, and the principal feature is the monthly album which is sent to each member.

THE INFALLIBLE EXPOSURE METER COMPANY,
237 SOUTH FOURTH STREET,
BROOKLYN, N. Y., Nov. 6, 1903.

MY DEAR MR. TODD,—We have recently had many complaints of letters to and from us not reaching their destinations. We have also had to replace meters and sundries lost or stolen (undoubtedly the latter) in the mails.

Please make known to your readers that we have done all in our power to remedy the matter, having filed many complaints at our local postoffice, and are now preparing to take the matter "higher up." Very respectfully yours,

HENRY WENZEL, JR.

A NEW RAPID ANASTIGMAT LENS.

The Voigtlaender & Son Optical Company announces that on January 1 it will be in position to sell the newest product of its factory, the Heliar lens.

It is an anastigmat lens working with an aperture of *f* 4.5 and remarkable for its sharpness and definition and its great brilliancy. It consists of five glasses, two interiors cemented together, two posteriors cemented together, and a single glass placed between the two. The mount will be of aluminum, which will be supplied with Iris diaphragm. The 4 by 5 lens will have a seven-inch focus, the 5 by 7, nine inches, etc.

There are other lenses working in some sizes with an opening of *f* 4.5, but the Heliar lens will be the only lens working with *f* 4.5 in all sizes. Owing to its large aperture it will not be possible to fit it to cameras such as Folding Pocket Kodak or Hawk Eye.

The value of the lens will be appreciated mainly by those who work with a focal plane shutter. The large sizes will probably supersede many of the portrait lenses for portrait work, as they will be able to make full figures and heads without stopping down.

In connection with the above we may say that we have had the pleasure of examining a 10 by 12 group of President Roosevelt and his family, which was made by Pack Brothers, using this new lens, and it is certainly a capital specimen of group photography. The definition is very fine.

APPLYING VARNISH.

Some little difficulty may be experienced by the tyro in applying varnish successfully to the back or front of his negative in a clean manner. Varnish, until one becomes accustomed to its little peculiarities, has a habit of refusing to flow evenly over the plate. Often a corner is left bare, or the hands are as freely covered as the film. Recently I have been using the "Ground Glass" variety, and owing to the presence of ether, and its consequent rapidity in drying, it is necessary to flow over, and that rapidly, a good quantity of the solution on the glass side of the negative. More often than not I found that there was a decided tendency to encroach on the film side, and to obviate this I now use an old printing-frame, same size as negative to be varnished, and which I find answers admirably. It allows a sufficiency of varnish to be poured on, and rapidly drained by a corner, back into the bottle.

C. A. R. P.

IOWA CONVENTION.

The executive committee of the Photographic Association of Iowa are already to the front with their program for 1904. The meeting will be held at Des Moines from April 19 to 21. The secretary is Mr. Townsend, Muscatine, Iowa.

Photo-Beacon Pub. Co., Chicago, Ill.:

GENTLEMEN,— Is it asking too much to request that you inform your readers that we have secured and are now preparing to move into a handsome new store, where we will have larger quarters and greatly improved facilities for handling our orders and receiving our visitors next year, during the World's Fair?

After January 1 our address will be 316-318 North Eighth street, directly opposite the postoffice and in the very heart of the city. The building is strong, light and almost new, and in every way far better adapted to our purposes.

We hope to have the pleasure of seeing you, too, as of course you expect to visit St. Louis some time during the Fair, if not sooner.

Yours very truly,
H. A. HYATT.

EDITORIAL TABLE.

THERE is no more complete catalogue issued for the use of the professional photographer than the one that comes from H. A. Hyatt, 410 North Broadway, St. Louis. We have gone through it very carefully and fail to find one article that is not listed in it. Every professional should have it in his workroom as a guide to all that is on the market. It will be sent on receipt of 10 cents in stamps to cover postage.

FROM Tennant & Ward, 287 Fourth avenue, New York, comes that ever-welcome visitor, "Photograms of the Year," which is published by the English firm of Dawbarn & Ward. As in former years, it consists of about two hundred reproductions of the best pictures exhibited throughout the world, and is thus of great value to every one interested in the pictorial side of photography. The literary matter consists of articles on photography in France, the United States, Germany, Australia and Great Britain, with many illustrations to adorn the text. The editor contributes a very practical article on "Suggestions to Would-Be Picture-Makers." The price of the book in paper cover is $1, in cloth $1.50, and can be had from the American agents, Tennant & Ward.

FROM The Anthony & Scovill Company, 122 Fifth avenue, New York, we have received a copy of "The American Annual of Photography" which is the only publication of its kind in this country. As it arrived just as we go to press, it is impossible to make an extended review of it, but must content ourselves with saying it is well worth the price asked for it, 75 cents in paper covers.

"THE BRITISH JOURNAL ALMANAC" will be ready for distribution by the American agents, G. Gennert, 24 East Thirteenth street, New York, about January 1. The edition is limited to twenty-five thousand copies, which are all sold by day of publication. G. Gennert, as usual, will lay in a liberal supply, and those wanting copies should order at once. The size of the book may be estimated from the pages of reading matter, which exceed 1,500, and includes reviews of all new processes, apparatus, paper and chemicals.

THE Blair Camera Company, Rochester, New York, sends us a copy of its Christmas catalogue, which, in addition to the cameras well known to the trade, has a decided novelty in the No. 2 model of No. 3 Folding Hawk Eye. In this instrument the bed is a double extension one, permitting very long draw on the bellows, and thus making the camera available for copying and close portraiture. It is also fitted with rising and falling front, and is adapted for both films and plates. Copy of the catalogue will be sent on request.

THE Bausch & Lomb Optical Company's quarter century competition created a vast amount of interest, and many thousands of prints were sent in. Just as we go to press we have received from the firm a copy of the preliminary announcement, giving the list of the awards. All the winning pictures have been reproduced in half-tone and have been issued in souvenir form at the remarkably low price of 25 cents. In addition the portfolio contains articles by ten of the most prominent prize-winners, so that the price does not begin to cover the cost of production.

LANTERN-SLIDE DEVELOPMENT.

There is probably no more interesting branch in photography, either for the amateur or professional, than the making of lantern slides.

When traveling in search of pictures, a scene comes before your eye which enchants you when you make a negative of it; but how different the resulting print from the scene at which you pointed your camera. When you look at your scene in nature you see a large panorama spread before your eye; when you look at your photograph you see a small, condensed facsimile, lacking the vastness and charm which attracted you to this particular spot. You can show the brook, the willow tree and the house and the mountains, but the vastness is lacking and there is something that you feel dissatisfied with. Of course I do not mean stereoscopic pictures, as these stand in a class entirely by themselves, as every one familiar with photography knows.

With a lantern slide properly made, you look upon a projected picture which is much nearer to the original than your 4 by 5 print, or whatever size the photograph might have been. With the proper projection, say up to thirty-five or forty feet, of a correctly made slide from a good negative, nothing is more pleasing to the eye.

A lantern slide, to be correctly made, should be properly timed and developed with a developing agent which, while thoroughly reducing all particles of the silver, will not in any way block up the shadows, so as to make them opaque. Such a developer has been the dream of the lantern-slide maker for years; and all experts will say, if you want such a slide you will have to go back to the old wet plates; but this old method has many disadvantages which commercially prohibit its use — its advantages need not be dwelt upon here.

The different dry-plate makers in this country and abroad have succeeded in producing lantern-slide emulsions on dry plates which are absolutely grainless, but the developing agent has been wanting for a long time. Pyro is out of the question for lantern slides, owing to its staining properties. The formulas accompanying different brands of lantern slides, made either in this country or abroad, generally contain hydroquinone, either alone or combined with metol. The hydroquinone is used to get the density and color, and the metol to render detail. But the use of hydroquinone has been very disadvantageous, owing to its tendency to block up the shadows, producing opacity. Metol has many disadvantages, the chief one seeming to be its poisonous properties. Ortol, Adurol, Glycin, Tolidol, Pyrocatchin and all the later developing agents have certain properties claimed for them, and I can truthfully say that I can make a good lantern slide with any of these developers under proper conditions, but each one of them has a tendency to block up in the shadows, and with many of them the development is very prolonged, which commercially is a great drawback.

I have been making lantern slides commercially for over four years, and during that time have produced nearly half a million slides; and it has only been within the last few months that I have found a developing agent which will answer the requirements which I demand in producing a perfect slide. This agent is Edinol, and was brought to my notice a few months ago by the makers, Farbenfabriken of Elberfeld Co. At first I was very skeptical of the claims made for this new developing agent, as all the new developers produced in the last few years have claimed about everything that could be claimed for a product of this character; but after I gave it a pretty thorough test in both negative making and lantern-slide making, I found that these claims were understated rather than exaggerated. I use Edinol entirely in my different darkrooms for every requirement for which a developer is needed. Edinol combined with acetone sulphite is, in my estimation, the most elastic developer yet produced, and is susceptible of more modifications to produce certain results than any developing agent at present on the market. For undertimed negatives (and every photographer will shiver at the word "undertimed") it will produce more detail and better reduction of the silver without fog than any developer that has yet been brought to my notice; while, on the other hand, an overexposure of several thousand times normal will produce a good, printable negative with Edinol, with a clearness in the high lights which is remarkable.

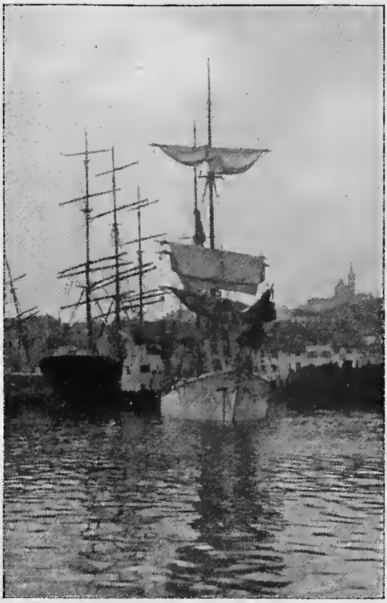
The makers publish two formulas of Edinol for lantern-slide making, one containing plain sulphite of soda, Edinol, hydroquinone and potassium carbonate:

Edinol	30 grains
Sodium sulphite (des.)	225 grains
Hydroquinone	45 grains
Potassium bromid	15 grains
Potass. carbonate (des.)	1⅔ ounces
Water	1 quart

The other containing acetone sulphite, Edinol and sodium carbonate:

Edinol	15 grains
Acetone sulphite (Bayer)	75 grains
Sodium carbonate (des.)	113 grains
Water	3½ ounces

The first-named formula I use for slides made from very flat negatives, and it produces all the snappiness that could be desired in a slide, without any blocking up of the shadows whatever; in fact, with proper development (and which, by the way, is extremely rapid) I have been able to read newspaper print through the deepest shadows in the slide, while all the details of the high lights of the negative are reproduced to a nicety. The second-named developer I use for very contrasty negatives and the reproduction in the slide of the blocked up high lights and harsh half-tones of a contrasty negative is wonderful. The combination of Edinol



Courtesy of the *Bulletin du Photo-Club de Paris.*

E. Adelot.

with acetone and sulphite seems to give the alkali increased power in opening the pores of the gelatin, so that the developing agent can attack the molecules of silver in the highest degree without any trace of fog whatever.

This is a wonderful stride which has been made in photographic chemistry, and too much credit can not be given to the makers of this splendid developing product.

Every photographer knows the tendency of hydroquinone to stain under forced development. When combined with Edinol and acetone sulphite, however, hydroquinone seems to lose these objectionable properties and also ceases to block up.

I use Edinol for development of portraiture negatives, landscape negatives, lantern slides and developing paper, and I have yet to find one single fault with it in any way. Negatives developed with Edinol have a quality which permits of beautiful intensification. On a recent trip to the northern part of New York State after some special views, I was obliged to make negatives on a very cloudy, flat, gray day, and, of course, the negatives showed this flatness, but they were developed very strong, then somewhat reduced and intensified, and the result would stagger an expert. It is not hard to see why these negatives intensified so well; it is because the reduction of the silver by Edinol is as perfect as can be obtained, and subsequent intensification tends to simply strengthen the image without producing opacity.

In conclusion, I would say that I would not be without Edinol, and if I were compelled to forego its use I would feel the same insecurity that every photographer has always felt when making negatives, or, in fact, in any branch of photography. But with Edinol I feel that I have a latitude to work under which permits me to give my whole attention to my subject, and not worry about the exposure, as I know I have a power which will produce a good result with very slight modifications in the proportions.

DeWitt C. Wheeler.

NOTES ON SULPHURETTING A SILVER IMAGE.

On three or four occasions within the last eighteen months I have had the opportunity afforded me of bringing to the notice of the readers of *Photography* an indirect method of converting a silver image into one of silver sulphid, the object of this proceeding being to obtain brown tones on bromid or similar papers and on lantern plates. This consists of first converting the silver image into one consisting of a halogen compound of silver, or else of silver ferrocyanid, and then sulphuretting these compounds.

Now, there are three conditions with which this or any other process should comply:

(1.) It must yield a good and permanent result.

(2.) It must be easy to carry out.

(3.) It must be capable, if it is going to be of general use, of being performed in an ordinary house or photographic laboratory, without damaging any of the surrounding objects, or causing annoyance to the operator or his neighbors.

None of the methods of indirect sulphuretting yet published, either by myself or by others, have wholly satisfied these three conditions. However, I have lately been able to clear up all difficulties, and to devise a method which is satisfactory in all these ways.

First, as to bleaching the image. I have come back to the view that iodin dissolved in potassium iodid solution is, on the whole, better than the bleaching powder method I formerly recommended. The chlorin evolved from the bleaching powder solution has so great an irritating effect on the operator's mucous membrane that it seriously interferes with his personal comfort. This is especially noticeable in the case of big enlargements on bromid paper, when a large surface of the chlorin evolving liquid is exposed. If the bleaching powder solution be used in dishes exposing a surface of more than about forty square inches it should be used out of doors. However, I would advise nobody to use it at all for this purpose.

If it is used, the print must be well washed afterward in running water before sulphuretting. The only bleaching solution which I recommend is:

Iodin	45 grains
Potassium iodid	110 grains
Water	to 10 ounces

When the action of this solution is complete, the image appears yellowish white on a deep blue ground. The blue color is due to an addition compound formed by the iodin with the starchy constituents of the paper. It is rather difficult to tell at this stage when the bleaching of the image is complete, but one soon gets into the way of judging the right time allowance. It is convenient to lift the prints in and out of the iodin solution by means of clips, which, of course, must not be made of metal. Any iodin stains on one's hands can be removed by the application of a solution of sodium sulphite, or of hypo, but the last traces are rather difficult to get rid of, and this is the reason why I recommend clips to be used.

The next operation is to transfer the prints straight from the iodin bath into a five per cent solution of sodium sulphite ($Na_2SO_3\ 7H_2O$). They are left in this bath till the blue color has been entirely destroyed. If it be now found that the bleaching has not been complete the print is thoroughly rinsed, and then put back into the iodin solution and left for a little time longer. It is then again treated with the sulphite bath. From the sulphite bath, which must not be allowed to get acid, the prints are immersed straight, without any washing, into the sulphuretting solution.

In a former letter I gave certain reasons in favor of using a solution of sulphuretted hydrogen (H_2S) in place of the solution of sodium sulphid ($Na_2S\ 9H_2O$) which I had originally recommended. My recent experiments have shown that all the objections to sodium sulphid can be got over entirely.

Before describing the method of using this substance, I will briefly consider the possible alternatives and the reasons against their use. These alternatives are:

(1.) Sulphuretted hydrogen.
(2.) Ammonium hydrosulphid.
(3.) Yellow ammonium sulphid.
(4.) Potassium sulphurata B.P.
(5.) Calcium polysulphid.

Now, No. 1, as I have already pointed out, is excellent from the point of view of actual toning, but its odor is exceedingly objectionable and necessitates the operation being conducted out of doors. Sulphuretted hydrogen gas escaping into the air of a room will not only pervade the whole house with its most offensive odor, but will tarnish any silver plate, brasswork or similar things, and will injuriously affect any photographic plates or silver printing papers with which it may happen to come in contact. The same objection holds with regard to Nos. 2 and 3, as both these solutions evolve sulphuretted hydrogen. With regard to Nos. 4 and 5, although they are fairly odorless, their use is highly objectionable, for they contain one potassium and the other calcium thiosulphate (hyposulphite).

It has been pointed out, both by myself and other writers, that some difference is made to the tone by varying the strength of the sulphuretting agent. I have lately proved that this is only the case where "hypo" or another soluble thiosulphate is present as an impurity. It is easy enough to see how this difference in tone is brought about.

A weak solution of sulphid gives the hyposulphite more time to act on the silver iodid, because its sulphuretting action is naturally slower, so that in this case we get a paler colored print than when a stronger solution is used. With good sulphuretting solutions containing no hyposulphite, the concentration of the solution makes no difference to the tone obtained. The tone, as I stated in the letter I have already quoted, is solely a function of the original silver deposit.

Now to return to sodium sulphid. This substance consists of large transparent deliquescent crystals, which are generally rather brownish in color. It is labeled and sold under the name "Sodium sulphid ($Na_2S\ 9H_2O$). Pure crystalline reagent for analysis." It can not at the present time be obtained in stock at photographic dealers, but it can be ordered through them, or may be purchased directly from any dealers in pure chemicals, such as Baird & Tatlock, of 14 Cross street, Hatton Garden, London, E. C.

While I certainly think this is a most excellent substance for sulphuretting purposes, I must at the same time protest against it being labeled "pure." It is nothing of the sort, but contains iron, whence the brownish color of the crystals. When these crystals are dissolved in water the iron goes into solution, too. Until quite recently I had no idea that such a state of things was possible. I thought any iron present would on solution be immediately precipitated as ferrous sulphid. In the crystals the iron very likely exists as a double sulphid of sodium and iron in the ferric state. On solution, this double sulphid is probably first converted into a double ferrous sulphid, and then very slowly ferrous sulphid itself is precipitated.

I stated in *Photography*, December 6, 1902, that alkaline sulphids "affect to some extent the tint of the tinted or cream crayon papers," and "precipitate iron sulphid in the paper." The cause of both these occurrences I have traced entirely to the iron contained in the sodium sulphid I used. I also stated that "they are likely to cause blisters." This is quite true, but only if they are used in too concentrated a solution.

Having ascertained the causes of my previous want of complete success with sodium sulphid, I at once saw a way out of them by means of which sodium sulphid, with its great advantage of practical odorlessness, could be employed.

The following is the method I advise of making up the sulphuretting solution. Weigh out 1½ ounces of sodium sulphid crystals. Dissolve these in about 10 ounces of water and heat to boiling, stirring the solution gently with a glass rod. A glass beaker or a porcelain evaporating basin is a suitable vessel in which to heat the solution. Keep the solution just boiling for about five minutes, and then filter it. All the iron will be found to have been precipitated and left on the filter paper as black ferrous sulphid, and the solution will now be almost colorless. The solution is allowed to cool, made up to 12½ ounces with water, bottled and labeled "Twelve per cent sodium sulphid solution."

The sulphuretting bath is made by taking 1 ounce of the stock sodium sulphid solution and adding 20 ounces of water. Only a very short time is needed for complete sulphuration, but care must be taken to allow sufficient. I think it necessary to leave the print in the sulphuretting bath for at least a minute after all change in color has apparently ceased.

After the sodium sulphid bath the print is washed for about two hours in running water, and is then finished.

As to the permanency of the result, I believe that a print treated in the way I have described is possessed of better lasting qualities than one having a plainly developed silver image upon it. Silver sulphid (Ag_2S) is an exceedingly stable compound, and an image consisting of it must be regarded as an absolutely permanent one. An image consisting of pure silver also possesses excellent keeping properties, but we all know that silver tarnishes in the presence of sulphids, and, of course, silver sulphid, to the formation of which the tarnishing is due, does not. We all know that our silver plate becomes tarnished by prolonged exposure to the traces of sulphuretted hydrogen in the air, and the silver image of a print must to some extent share the same fate. Another cause of slow deterioration of silver prints due to the action of hydrogen sulphid is the decomposition of the emulsion vehicle, when that vehicle, as is the case with gelatin or albumen, contains sulphur. However, these are very slowly acting causes of fading; as is also the gradual failing of the actual paper on which the emulsion is spread, to which, of course, all kinds of prints are liable.

Practically speaking, by the fading of prints, we mean the quick fading only, i. e., the fading at the end of three

J. MALVAUX SC.

Courtesy of the *Bulletin du Photo-Club de Paris.*

years or so. This quick fading of silver prints, when it occurs, depends on the presence of chemical impurities, generally traces of hypo not completely eliminated after fixing.

Now, in comparing the lasting qualities of the toned silver print and the original silver print we have chiefly to consider which method gives us the best chance of obtaining a print free from traces of hypo or other unstable sulphur compounds. It is well known that in all prints that have been fixed with hypo there always lurks, even after prolonged washing, exceedingly small traces of the reagent in the fabric of the paper. When iodin comes in contact with a thiosulphate the well-known action represented by

$$2Na_2S_2O_3 + I_2 = 2NaI + Na_2S_4O_6$$

in the case of the sodium salt occurs. An iodid and a tetrathionate are formed.

Although the thiosulphate is got rid of by the iodin, I believe the tetrathionate which is formed is equally objectionable, and so at first sight it does not appear that we are any better off. Still, the probability is that we are to some extent, for the chemical change will cause a certain amount of place disturbance, and so will help the subsequent washing to carry out its function. It must also be noticed that in actual practice one is certain to wash a toned print for a longer time in all than a plainly developed one. Any trace of a sulphur-containing compound introduced during fixing, and not subsequently entirely removed, will affect, in so far as it may cause sulphuration of the image, a plain silver image, but not one of silver sulphid; but in so far as it may lead to the eventual formation of sulphuric acid, it will probably equally affect all kinds of prints.

It appears, therefore, that everywhere the toned print holds a slight advantage in lasting properties over the untoned one.

To return to the consideration of the actual toning. As I have before said, the tone finally obtained is solely a function of the original silver deposit. The most pleasing tone is got when we have a good vigorous image to deal with — one in which the deepest shadows are of a pure black hue. Such an image can be well obtained by giving a correct exposure and developing with

Amidol	2 grains
Potassium bromid	½ grain
Sodium sulphite	20 grains
Water	to 1 ounce

The tone obtained in this case is a deep rich brown, and is equal fully to that obtained by the hypo-alum method when that method is working at its *very best*. Now, in order to work the hypo-alum method at its best, certain conditions, as a rule not fully stated, must be complied with. I think these conditions are:

(1.) The bath must be "years old." This I was told by a professional photographer who obtains the very best results I have ever seen by the hypo-alum method.

(2.) Considerable overexposure is necessary. I think about thirty per cent.

(3.) An amidol developer should be used.

(4.) The bath should be used much colder than generally recommended. I do not think the temperature should exceed 30° C. (86° F.). Of course, this slows toning — at the best slow enough.

The method is not so easy or so simple to carry out as the indirect sulphuretting method I have described, and it is only when working at its *very best* that it yields results equal to the indirect method. As to the permanency of the result, if the final washing is sufficient it is probably the same as that of an indirectly sulphuretted print; but there is this to be said, that, during toning, a deposit of finely divided sulphur may take place in the fabric of the paper and the film, which may not be so fine as to be washed out, and, if this be so, it can not fail to shorten the life of the print.

The tones obtained on bromid paper by any sulphuretting method do not show very much variation in color.

If a wider choice of tint is desired the indirect method easily adapts itself to this end. If after bleaching we use, instead of a plain sulphuretting bath, Schlippe's salt (sodium thioantimonate,

$Na_3SbS_4\ 9H_2O$), either by itself or combined with sodium sulphite, a great variety of tones may be obtained. Schlippe's salt has before this been recommended, but I have not seen any reference in print to a mixture of this substance with sodium sulphid. Sodium thioantimonate is a very unstable salt; even the carbon dioxid of the air decomposes it, forming sodium sulphid, sodium thiosulphate and antimony tri and penta sulphids. The crystals are always covered with a crust of decomposition material, which must be washed off before use. The solution does not keep well, depositing sulphids of antimony. Silver thioantimonate is quite a stable salt, however, and an image composed of it may at all events be regarded as equal in keeping quality to a plain silver one.

In actual toning it is important to remember that the solution of Schlippe's salt should not be used too strong, about one per cent being right, and that the print must not be immersed in water immediately after its use, but must first be put for a few minutes into a solution of ammonia of about one-third per cent strength. If sodium sulphid be mixed with it the ammonia bath need not be used. These precautions are necessary to prevent any antimony sulphids being deposited in the film and fabric of the paper.

I have unfortunately found Schlippe's salt by no means a reliable substance for toning purposes, because sometimes it yields a "carbon red" tone and sometimes only poor brownish orange shades. This change in tone is probably due to a very slight and subtle difference in the silver deposit, of which difference I can not trace the cause; for I can obtain no evidence to show that it is due either to difference in development treatment, or to chemical changes in the toning bath. As far as I can at present see, the chief determining factor is the actual condition of the paper. I certainly once obtained most excellent results on some decidedly old Eastman's Royal bromid.

It is only when we get a good carbon red tone in our silver thioantimonate that the results are worth anything. In this case, we can obtain any color between carbon red and dark brown by using either Schlippe's salt alone, Schlippe's salt and sodium sulphid, or sodium sulphid alone.

In order to test what can be done in this way, I would advise any one who wishes to try this method to tone five prints possessing good vigorous images, one in each of the following baths, the first washing after Nos. 1 and 2 being in dilute ammonia solution:

(1)	Schlippe's salt	4½	grains
	Water	to 1	ounce
(2)	Schlippe's salt	4½	grains
	Sodium sulphid	⅓	grain
	Water	to 1	ounce
(3)	Schlippe's salt	4½	grains
	Sodium sulphid	⅔	grain
	Water	to 1	ounce
(4)	Schlippe's salt	4½	grains
	Sodium sulphid	1	grain
	Water	to 1	ounce
(5)	Schlippe's salt	4½	grains
	Sodium sulphid	1⅔	grains
	Water	to 1	ounce

And this is a bath that sometimes gives most beautiful sepia tones. The print after immersion in this bath can be washed directly in water.

Another bath that may be tried is:

Schlippe's salt	4½	grains
Ammonia solution (.880)	1	minim
Water	to 1	ounce

It is also possible to tone a print with Schlippe's salt, and then to immerse directly in a solution of sodium sulphid of about one-third per cent strength. By varying the time of immersion we get different tones.

Again, I have little doubt that sodium thioantimonite, sodium thioarsenite and sodium thioarsenate could be used as constituting toning baths for a bleached print. I have not tried them, however, and I doubt whether they could be bought, but they would not be difficult to make.

Still, to me, it seems that the chief use of the indirect sulphuretting method is to obtain a good dark brown image, consisting of pure silver sulphid, and although I have indicated how it can be used for a greater diversity of tones, I do not think that this extension of the method will be very much employed, at least not until it can be put on a more certain basis.

There finally remains one question to answer. "Why," I have seen it asked, "if you want colored results, don't you use the carbon process?"

Well, in the first place, I do not see why the query should be confined to colored prints. Black ones can be obtained by the carbon process. Certainly the carbon-printing process, generally speaking, is the best process of all, as it gives a much finer artistic finish to a print than any other. However, especially for enlargements, the carbon process is more bother to carry out from one cause or another than the silver bromid emulsion one, and so it has not yet replaced it.

I am altogether opposed to doing anything to the silver image which will shorten its life in any way, but I have shown that sulphuretting has exactly the opposite effect. There are now an immense number of bromid enlargements done annually, and of these a very large number are toned brown. I am confident that if those now using the hypo-alum method will give the indirect method a fair trial, ninety-nine out of a hundred of them will find that they can obtain better results than they have been getting by their former proceedings, and they will all find it a much more simple and easy method to carry out than its older rival. Hardly any practice or experience is needed for working the indirect sulphuretting method to its full advantage.—*Photography.* R. E. BLAKE-SMITH.

QUESTION BOX.

PHOTOGRAPHING STORE FRONTS.

This is a perennial question that I must answer about once in every two weeks. The great problem is how to avoid reflections. The only method I know is to erect a screen covered with black cloth along the sidewalk in front of the window, high enough to cut out the view opposite, and far enough away to admit plenty of light from the top. At a convenient height make a hole for the lens, and have the camera on the side away from the window. F. D. T.

PRESIDENT PARKINSON'S ADDRESS AT THE NEW ENGLAND CONVENTION.

Another year with its cares and labors, and I trust with its successes and its joys, has rolled round and we again meet together, willing captives to the pleasures and benefits of the seventh annual convention of the Photographers' Association of New England.

I believe we are all old enough to have learned and to have experienced that truth which is as old, aye, older than Christianity itself, that the key to the gate of pleasure, we seek for ourselves, in convention assembled as elsewhere, is the one we employ to unlock the door of happiness to those around us, and that the ladder by which we climb to the tableland of higher achievement and success is the one we gladly offer our brother in the art by which he may mount to the same elevation.

It seems to me that this spirit of mutual helpfulness has increased and is increasing in New England. In my short residence here, less than four years, I can gladly bear testimony to the fact. I have been absolutely surprised how willingly certain photographers, my own competitors, have imparted to me their little pet tricks of printing-room and skylight. It is not a month since two of my near and ablest competitors were advising and discussing with me a way of improving my own skylight. They could not have displayed more interest had they been planning for their own. Why is this? I will tell you. They have caught the modern spirit of the times. But after all it is an ancient spirit. Was it not said of One of old, higher than we, that he gave without impoverishment? The more he gave the more he had. The more you exhaust the lungs the more they can draw the next breath.

There is a beauty in a new school of photography, but there is a greater beauty in our school of photographers. They have learned that bread cast upon the waters returneth after many days; they have learned that he to whom they give may be a giver to them soon; they have learned that the hugging of little pet secrets narrows the soul and enlargeth not the pocket-book over much; they have learned that to give their pet developer to a brother photographer not only helps him to develop his own plates, but assists them to develop their own manhood. Equal knowledge of photographic discoveries and inventions will not make equal photographers. Were all tricks and secrets of our art as familiar to all as the air of heaven is free, photographic productions would still differ as one star differeth from another.

We meet this year in the building we have always engaged, but in such a new way that it seems like a man with a new suit of clothes, who has married a new wife, and moved into a new house. I believe, right now on the threshold of this convention, that mutual felicitation over the happy thought of having our lectures in this secluded hall comes spontaneously into the minds of all. Our speakers may now fear neither irritation of throat nor spirit, and our audiences may sit as at a feast, undiverted by the noise and confusion of former times.

The hasty glance you have all doubtless already given the walls of the adjacent hall, I feel sure, has convinced you that the art tide has once again reached the high-water mark of last year. On those walls you observe the cream of the National Association — twenty cases containing perhaps the highest average of artistic photography ever hung in Boston, are here. When we look at them we rejoice that the executive board was wise and just enough to send our able secretary, Mr. G. M. Bolton, to Indianapolis for their collection. I say just enough, because it is a partial acknowledgment of our indebtedness to him for the heroic work he did in Buffalo, at his own expense, foregoing almost entirely the pleasures and benefits of the convention, which resulted in our beautiful national loan exhibit of last year. We do not forget that ex-President Hearn did noble work at Buffalo in this same direction, and as I mention his name it seems not an inappropriate moment to pause and congratulate him that going to Indianapolis this year, to attend the national convention, he returns to us a photographic national figure.

A foreign exhibit smiles once again upon us from our walls. Russia, Belgium, Germany, England and France speak to us in a language more potent than words, telling us what they are thinking, in black and white, brown or sepia, on the other side of the great

C. Puyo. Courtesy of the *Bulletin du Photo-Club de Paris.*

water. We understand their import, for the message of pictures, like love, is the same in all languages.

For this foreign collection we are almost entirely indebted to our first vice-president, Mr. George E. Tingley, and Mr. Wilfred French. As Mr. French is not a professional photographer, and not an officer of this association, I desire to call attention in the most emphatic terms to his incessant labors in our behalf for months past, personally on the ground, at his own expense, in the cities of Paris and Berlin.

But what of New England; are we in the van, are we abreast, or are we among the "also rans?" I do not answer this question. Let each one pause, consider and decide for himself. Felicitate ourselves as much as we may over our national and foreign loan exhibit, we will find them not an unmixed blessing if they are to become the crutches upon which we are to walk. A man who leans upon an outside support will find himself in sorry plight when the friendly prop is gone.

I sent out about forty special letters to the leading photographers of New England to get pictures for the National, and to be hung later by us here. About fifteen responded. These did the best they could under the circumstances, but in the main they seemed taken from the average daily work and did not bear the earmarks of a definite and supreme effort for a definite and supreme purpose. Some may say the average work is what we want to see; not so, in my opinion. Call a given photographer's exhibition work 20 and his average work 10; if he can by supreme effort pull his exhibition work up to 40, the very education of the process will pull his average work to 20. A great pianist does not play rag-time at a concert; a minister does not talk in the pulpit as he chatters to his babies at the breakfast table.

There is paralysis in disuse, so let us, brother photographers of New England, energize ourselves to take our place in the first column where we belong. There is no dearth of New England talent, it is equal to the best; there is no dearth of New England good intentions, but I sometimes think there is a surplus of New England procrastination when it comes to making convention pictures. John Sherman said, "The way to resume specie payments is to resume." The way to make convention photographs is to make convention photographs. If it were as easy to begin to make convention pictures as it is easy to make beautiful ones after we begin, we would have the ability in New England to set up an exhibit that would disarm all criticism.

I am making no coat I am not willing to put on. The best picture I have in this convention I made this week. No credit to me for that. I should have made it months ago, when not busy with immediate convention matters, but I promise, and I trust you will all join me in the pledge, to do better and to do better work next year.

And in doing better work let us not be too economical of plates. While there is more joy in the darkroom over one clear plate than over ninety and nine that are fogged, yet I believe I would willingly fog ninety and nine if through the fog I could discern in the one the form and lineaments of a perfect photographic work of art. Let us also not be too imitative. I have sometimes thought were I the jury under a prize system, I would award the victory to the youthful operator who, though with imperfect technic and clumsy execution, had evolved something original and capable of future development, rather than to one who had produced some ever so faultless imitation. Do not gather from what I have said that I am pessimistic about New England. Some of our exhibitors have no peers in our broad land, but I do not like to see any of our old veterans drop out or drop down to one picture, and, above all, I appeal for a more general response from the rank and file.

Stay with us as long as you can, old veterans of New England, for even to-day we have office boys, errand boys and darkroom boys, who have watchful eyes and thinking brains and in an all too soon to-morrow will take our places. I have one of these boys in my mind this moment. A few short years ago he occupied an almost servile position in an average gallery, but he kept thinking; a twelve-month passed and he was the assistant darkroom boy, and he kept on thinking; another year and we see him master of the darkroom, and he kept on thinking; then a few short months and he was assistant operator and then operator at one of the highest salaries in the United States, and he kept on thinking, and now he is owner of one of the finest studios in the country and makes pictures for our conventions surpassed by none, and he keeps on thinking. How near together are our yesterdays and to-morrows. Shall we be discouraged when a man comes from far-off Mexico to show us how to make photographs with a kodak, at common little home windows, that rival the best work of the best studios, thus opening to us a new avenue of profit; shall we be discouraged when the States are united to help each other and help us in the systematizing of all convention matters, now so often tangled; shall we be discouraged when the art managers of the St. Louis Exposition have admitted photography to the sacred walls of the artist, the first time in the history of the world when she has been officially recognized by painters as one of the fine arts? No, we shall not be discouraged, but we shall rouse ourselves to renewed effort. Young photographers, rouse yourselves, for you have a bright future; old war horses, rouse yourselves, for the days are growing shorter and then night is drawing near! Shall lawyers, doctors, explorers, financiers, statesmen and soldiers monopolize the great energies of the world? What profession has penetrated more homes and brought to them more happiness than ours? In a million homes to-day photography is wiping away the tear from the eye of grief; through it a million mothers and fathers, and sons and daughters, are recalling the faces of the beloved ones long since laid to rest in the silent tomb. So let us rouse ourselves, for the spirit of the poet's meaning included us with other Alpine climbers:

"'Try not the pass!' the old man said;
'Dark lowers the tempest overhead,
The roaring torrent is deep and wide!'
But loud that clarion voice replied,
'Excelsior!'"

Let us rouse ourselves, for to many of us with deepening wrinkles and silvering threads among the gold, sooner than we realize the shadows of the coming night will gently settle over the skylight; for the last time we shall develop, fix, wash and put in the rack our last plate to be printed, if printed at all, by those we leave behind.

"A traveler, by the faithful hound,
Half-buried in the snow was found,
Still grasping in his hand of ice
That banner with the strange device,
'Excelsior!'"

SOME CAUSES OF LACK OF BRILLIANCY IN NEGATIVES.

Those to which we refer obtain more or less all the year round, and are very frequently overlooked by even the most experienced workers, simply because they accumulate so slowly. For example, dirty studio windows are a very prolific source of want of brilliancy in portrait negatives. In large towns condensed smoke, dust, and the like, form a film on the glass both inside and out, which it is needless to say entails a longer exposure being given, though, with gelatin plates, that is not a very serious matter; with collodion plates it was different. Unfortunately, however, this is not the worst of it, for it causes a haze in the studio, more particularly when the sun is shining on the glass, and more especially when it is getting near the horizon. This haze very materially impairs the brilliancy of the negatives, the shadows being no longer clear and the lights bright. If, however, the glass be cleaned the results will be widely different. Some professionals we know, since the introduction of gelatin plates pay little attention to the state of the studio windows (though they did not neglect them in the collodion days), especially those in the roof, which sometimes are not cleaned from year's end to year's end, except what is done by rain, but that does not cleanse the inside.

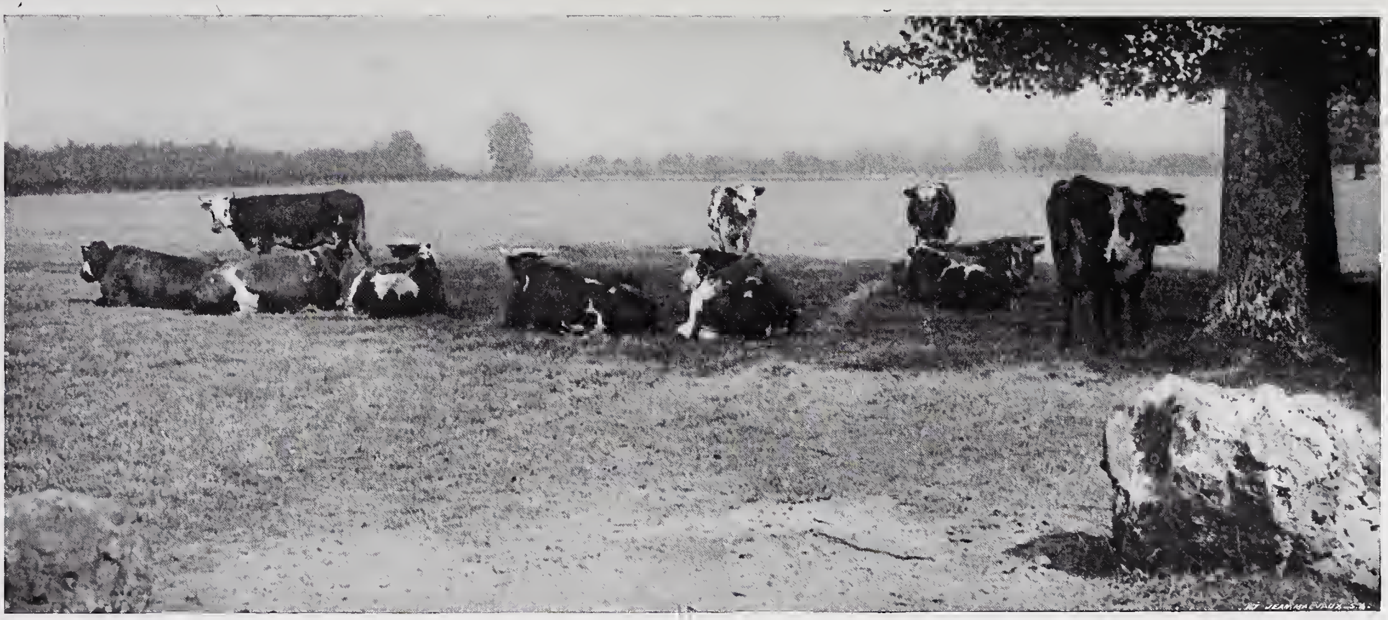
Here is another very frequent cause of want of brilliancy in negatives, namely, the state of the insides of the cameras. Modern studio cameras usually have a bellows body. When new the inside of the bellows is fairly black, but with constant use it gradually loses its blackness and becomes gray and somewhat polished, with the result that the stray light from the lens, instead of being absorbed, is to an extent reflected and diffused. The same applies to the woodwork; the black from that gets rubbed off or polished with constant dusting and brings about a similar result.

A source of lack of vigor in negatives is often the lens; this, when issued by its maker, has the inside of the mount of a deep dead black, the stops also being black. With use the stops become more or less bright, particularly around the openings, and the insides of the tubes, by cleaning, get much of the black removed, or what is not removed becomes polished. Consequently, light is reflected from all portions of the mount, and the image on the focusing screen is not so brilliant and "black" as it used to be when the instrument was new. The remedy for this state of things is obvious. The reblacking of a lens-tube, it may be mentioned, is a very simple matter. All that has to be done is to mix some "drop black" with diluted negative, or shellac, varnish and apply with a brush. Only sufficient varnish should be used to make the color adherent; more than that would cause the blacking to dry glossy, and that must, of course, be avoided. As illustrating the advantage of having the lens mount well blacked, let anyone who has a lens in the state just referred to note the appearance of the image on the focusing screen before and after reblacking, so as to restore the instrument to its original state and see the difference made. He will probably be surprised at the result.

Another matter in connection with lenses and the brilliancy of the images they yield is sometimes overlooked. As issued by the makers the surfaces of the glasses are highly polished and clean, but in the studio they are often allowed to stand about and get a coating of dust on the surface. Now, if a lens be used in this state, not only will it be slower in action, but the image, as seen on the focusing glass, will lack brilliancy, and that, of course, will show itself in the negative, and sometimes to a marked degree. Dirt on the surface is often a prolific source of flat and veiled negatives taken with fixed-focus hand cameras. The lenses accumulate dust on the inner surface and they can not be removed for cleaning, hence the negatives suffer. When a lens is cleaned it is frequently done in such a perfunctory way that the surfaces of the glasses are permanently injured. We have several times seen lenses cleaned with the focusing cloth, itself well charged with dust, and in the case of hand cameras, when the lenses have been covered with road grit, it has been roughly rubbed off with a handkerchief. The result of such treatment, when long continued, is that the surface of the glasses becomes in time so abraded as to reduce the polish to what, we believe, opticians term a state of semi-polish — the high polish which the optician has taken such pains to give us is practically destroyed, the result being that the image the instrument yields is gray and flat instead of being black and vigorous, thus causing the negative to be deficient in brilliancy.

The causes, here pointed out, which conduce to the want of brilliancy in negatives, taken individually, do not amount to very much, but taken collectively they have a very marked effect on the results, and, as we have said, they accumulate so slowly that they are frequently not realized even by experienced workers until, in the end, they become very palpable, and then even the actual cause is frequently but little suspected.—*The British Journal of Photography.*

THOUGH the weather be cold the season for flowers is not so very far off. Read the *Home Bazaar* big flower offer in advertising pages, then act.



P. Bourgeois.

Courtesy of the *Bulletin du Photo-Club de Paris.*

A PHOTOGRAPHIC CHRISTMAS GIFT—A YEAR-ROUND UTILITY.

In making up lists of relatives, friends and acquaintances whom we wish to remember with a gift at Christmastide, we find that those whom we class as less intimate friends and acquaintances are hardest to provide for. This is so, because we know in many cases what the needs and wishes are of those near to us, and further desire and intend to remember them with something which requires quite a little expenditure, be it of time or money, on our part. For the others the gift must be appropriate and pleasing, yet not costly. And there's the rub.

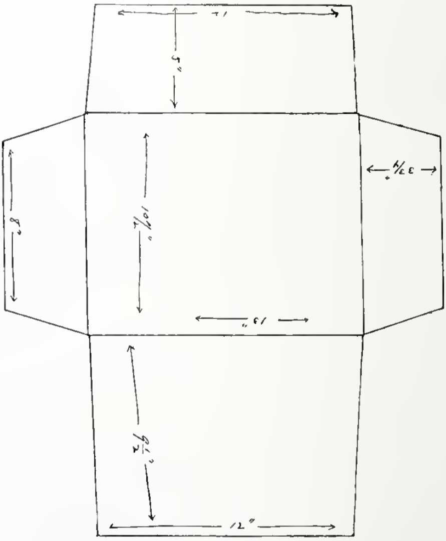
Ordinarily considered, the amateur photographer would seem to have the means to meet the situation without trouble. For has he not a plenitude of picturesque landscape bits to please those who have art tendencies, of genre for the story reader, and portrait groups and the like for the social fellow? True, but the cry is how shall we send them? Just mount them up on regular mounts? That wont do. Make up calendars? Everybody has them. Fill an album? An album never shows the prints to good advantage.

In other words, you face the same problem in this business of Christmas gifts as that which confronts us all through the year, namely, how may small prints which we do not care to frame be preserved neatly, artistically and compactly. That problem, I believe, is solved by the portfolio which I describe below.

Most of my prints are between 4 by 6 and 5 by 7 inches in size, and I use mounts 10 by 12½ inches. The dimensions given herewith are to accommodate this size of mount. For mounts I may say that I use very largely the various beautiful shades of cover-paper now so much the vogue.

I secured from a paper-house some heavy wrapping-paper of a pleasing yellow shade. This I cut up by placing on it a form of heavy cardboard of the shape and dimensions shown in Fig. 1, and cutting around its outline with a sharp knife. Next I folded in the four leaves, the two equal ones first and the largest one last; it forms the cover. My portfolios were now complete. I was able to make up an assortment of prints in nice shape, to give as a present or show to friends who might call.

But I was not satisfied with this plain case. There must be some way of indicating the nature of its contents. The stencil solved the problem. By marking, designing or even pasting cut-out letters on a piece of thin, durable cardboard the legend you desire, which may be simply landscapes, portraits or perhaps some odd phrase, may be then cut through with a sharp, fine-pointed knife and you have the wherewithal for marking any number of portfolios expeditiously and in the most approved manner. Remember the beauty of the finished work depends on the care you exercise in getting the stencil cut satisfactorily. The rest is easy — give that your time. Be careful to secure a color composition which does not rub.



If you prefer and care to go to the expense and trouble, you can stencil with the "size" used for holding gold-leaf and apply that or silver-leaf to the characters. Or you may strew them with any powdered pigment. If you have a large number, you may take them to a printer as I did those illustrated and at a nominal cost have them typed.

And, when done, these portfolios are in themselves very artistic — "good stuff," as artists say.

Oscar von Engeln.

FOCUSING IN A FOG — AND THE WAY OUT.

(Copyright, 1900, by William Bullock.)

In amateur photography there is something new continually cropping out to surprise the amateur. He may thus easily learn from the experience of another what he would never acquire in his own.

We find an amateur taking a group in the sunshine: knowing our proclivities he hails us with, "How long would you give this?" "Wouldn't give any," we say; "wouldn't take it in this sunlight at all if we could do otherwise."

"Got to take it," says the amateur, "can't get the crowd again; no place for shade; hate to take it in the sun; can time it all right I think, but I know it's sure to come out with black and white faces."

Finding our amateur friend posted as to correct exposure and that one-tenth second generally gives him a fine negative only for the black and white which most amateurs succeed in obtaining, we set him right by telling him to give it nearly half a second, which he does, and, upon development, obtains a good, evenly lighted picture.

We demonstrated this a short time ago when called upon to photograph street railroad crews in their cars or on the outside of them. The day was hot and cloudless and we photographed each car as it reached the end of the line every few minutes for several hours, sometimes the wives of the crews and additional men would make a group of six to a dozen each car.

We purposely overtimed every plate and developed with a small amount of soda. Every plate was a good negative.

"What caused the improvement in lighting?" you say.

Simply this: The correct exposure of about 1-20 second would have deposited or formed, by the action of the developer, the proper amount of opacity on that portion of the negative representing the faces of the group, but on one side of the face only. The sunlit side of the faces in the group would be the dark side in the negative. The shadow side of the faces in the group would be clear glass in the negative, or nearly so. This would be all right if they were other objects than faces, the camera having interpreted the degree and gradation of light correctly with the proper exposure.

But this is one of those "new" things we have to contend with. It is a case of the right exposure not being the right exposure. We exposed at 1-5 second or four times the normal. And this is what occurred:

The overexposure gave off so much more light from the sunlit side of the faces than was necessary on the negative to produce a rich dark deposit on half of the face, as correct exposure would have done (which would print chalky) that solarization was effected on the dark half of the face on the negative, and it was impossible for the developer to produce the usual dark deposit which correct exposure had given. Hence the dark side of the faces on the negative were thinner in deposit and printed darker in the print, thus losing the chalkiness.

Again, the overexposure gave so much more light from the shadow side of the faces than was necessary to produce only the clear glass, which would have resulted (printing very dark) from correct exposure, that it remained clear glass no longer. It was so affected chemically by this excess of exposure that it produced an opacity which, of course, in printing did not come out black as it otherwise would have done. Hence, an improvement.

So that, by overexposing the group in bright sunlight, the darks of the faces in the negative tended to reverse themselves and were lighter. The lights of the faces in the negative (or the clear glass) received opacity through overexposure and were darker.

Therefore, the effect was almost the same as though the sun was clouded.

Thus we see that an exposure in sunlight which might suit a tree or a house, would not suit a face.

Then there is another thing. Why not quit taking so many landscapes with short focus lenses, which, when printed, look as if they had been photographed through a telescope backwards; everything being so small that it bears little resemblance to the original scene, only the tree, figure or house in front being of proper size. A long-focus attachment to the bellows will enable you to remedy the difficulty.

The owner of a large stock farm lately showed us photographs of his farm, taken from an elevation about two thousand feet away. He wanted the view for the purpose of showing all the buildings at once and using the same as a cut on his business papers and catalogues. All the buildings could not be taken at once in the hollow where they stood. In his photographs taken from the elevation they looked like specks, they were so small; too small for his purpose, although the useless landscape was in abundant evidence on each side of the buildings. We were called upon to photograph the buildings. Being without our tele-photo lens, and the distance not being excessive, we drew out the bellows from a six-inch focus to eighteen inches, and, after separating the aplanatic lens combination to get a longer focus (by using the front part only), the image on the ground glass was found to be increased in height or diameter just three times, and all the details of the buildings, cornshucks in the fields, etc., were plainly visible.

"Just what I want," said the stock man, enthusiastically, as he emerged from under the focusing cloth, after attempting to stand on his head in an endeavor to see the picture on the ground glass, the buildings of which, of course, filled up the entire plate.

"How long did you expose it?" some one asks.

One-twelfth second at U. S. 64 was the right exposure for the time, light and subject. But the image being three times larger in diameter, or height, was $3 \times 3 = 9$ times the area of an ordinary image; which, of course, necessitated 9 times the ordinary exposure, which, being 1-12 second in this case, required $9 \times 1\text{-}12 = \frac{3}{4}$ second.

We exposed ¾ second, using only one plate, which was a good negative, giving a print which shows fine gradation of light and shade with sufficient detail to answer the commercial requirements.

Most rapid rectilinear lenses will, by unscrewing them in the center or near the ends, give a front or back combination which can thus be used for landscape, if the bellows of the camera can be extended to accommodate the increased focus. Then, for the exposure, multiply the square of the bellows extension, which in our case was three times, or from six to eighteen inches, thus giving three (the square of which is nine) by the ordinary exposure required, as shown in the first calculation. As a rule, the square of either the increased diameter of any object in the image, or the square of the increased bellows extension over that of the ordinary size of object with lens at short focus or extension of bellows at that focus will, when multiplied by the ordinary exposure, give the correct time for the long-focus landscape view.

WILLIAM BULLOCK.

FASTENING GLASS AND METAL TOGETHER.

Many a photographer has been sorely plagued by a leaky skylight, which the builder has vainly attempted to cure. But the use of the following simple mixture will enable him to defy the rain, to dispense with the builder, and yet to have a watertight skylight:

Resin	5	parts
Soda	1½	"
Soluble glass	½ to ¾	"
Water	5½	"

Boil them all together, and of the resultant soapy mass mix fifty parts with eighty parts of plaster. This cement is watertight.

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